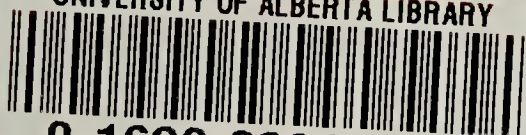


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BLUE JAY

June 1995



Blue Jay, founded in 1942 by Isabel M. Priestly, is a journal of natural history and conservation for Saskatchewan and adjacent regions. It is published quarterly by **Nature Saskatchewan, 206-1860 Lorne Street, Regina, Saskatchewan, S4P 2L7.**

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Common names are used for species where possible. Bird names follow the 1983 revision of the *American Ornithologists' Union Check-list*. Mammals are from Banfield's *The Mammals of Canada* (1974). Since insect and plant names are not standardized, scientific names are included, with authorities where deemed necessary.

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Cover: Canadian Toad (*Bufo hemiophrys*) on *Rosialis borealis* mushroom. Photo by Barry Giles.

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EDITORIAL

Many members of Nature Saskatchewan will be surprised to realize that the reins of *Blue Jay* have been turned over to an Albertan. It is, I think, a sign of the continuing maturation of this fine publication. Many long-standing members of Nature Saskatchewan, including myself, reside in Manitoba and Alberta. *Blue Jay* is clearly the primary natural history publication outlet for the Canadian prairie provinces. An appropriate balance has been struck in the past between science and natural history and my goal is to maintain that balance. No doubt, from time to time, Nature Saskatchewan members will feel that *Blue Jay* has gone too far in one direction or another. Let me know. I will listen.

I apologize in advance for the timing and organization of the first issue or two. It is my intention, once I get on top of the material in inventory and the review process, that *Blue Jay* will be mailed out on time. Furthermore, all manuscripts and other material found to be appropriate for publication in *Blue Jay* will be published in order of acceptance whenever possible. On that note, a reminder to please keep the material coming in. Articles, notes, poems, etc. on any aspect of natural history in the prairie provinces is welcome. Although my team of Associate Editors is very solid, a few additions would help. Someone willing to review paleontological/geological material would be welcome, as would a qualified individual interested in aquatic ecology and fish biology. Regardless of your qualifications, if you would like to get involved in any way in the production of *Blue Jay* — please step forward.

Sincerely,



Douglas M. Collister

IN MEMORIAM

VICTOR JOHN HARPER 1900-1995

C. STUART HOUSTON, 863 University Drive, Saskatoon, SK. S7N 0J8

Vic Harper was a kind, wise and gentle man, with a superb sense of humour. Quiet and modest, he was a friend to people of all ages. He didn't have an enemy in the world.

A busy farmer, Vic was fond of wildlife and the out-of-doors. Bird photography was his favourite hobby. He put up bluebird houses at his farm, 20 km northwest of Saskatoon, and attracted Mountain Bluebirds which he watched from his window. One of his bluebird pairs nested twice in the same year, and both broods were banded by Mary Houston. Black-capped Chickadees were so trusting that they took sunflower seeds from his mouth.

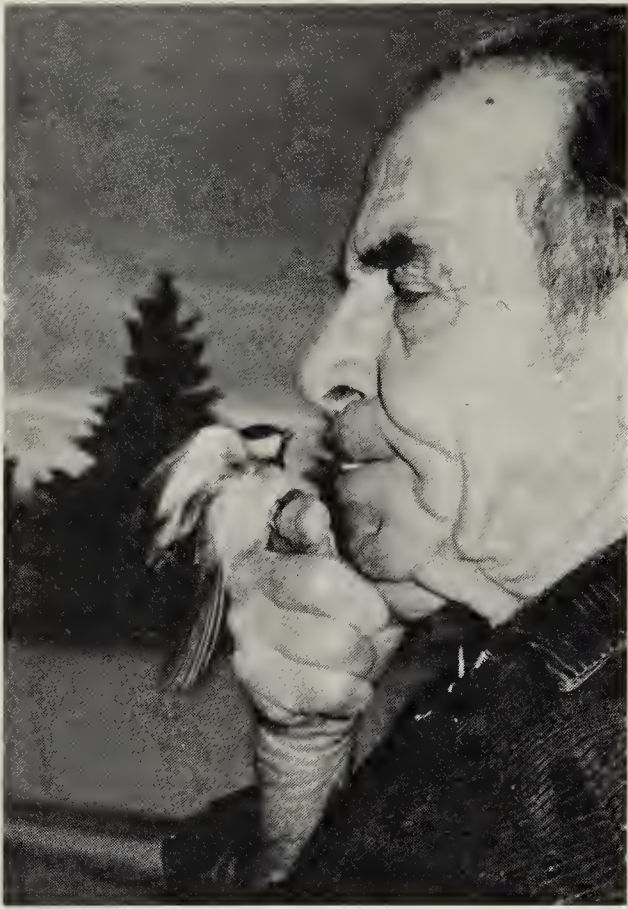
Vic was delighted when Western Kingbirds first nested in his fine farm shelterbelt. That year both Eastern and Western Kingbirds nested. Another year he found a Short-eared Owl nest while discing the stubble. Always thoughtful, he called me out to band the young owls.

Above all, Vic was quietly proud of finding the Saskatoon area's first nest of the Orchard Oriole, on the south edge of his farm shelterbelt, and within sight of his farm home. His Orchard Oriole nest record stands to this day as the most northerly in the province. Manley Callin had found the first Saskatchewan nest at Fort Qu'Appelle in July 1974. Only six years after that, Vic noted a territorial pair in his trees on 15 June 1980, the same year that Dale Hjertaas and Nigel Caulkett found an

Orchard Oriole nest near Buffalo Pound Lake on 30 June. Vic's nephew, Stan Shadick, having gone down to Buffalo Pound with Lawrence Baschak on 12 July to see that nest, decided on their return to Saskatoon to help Uncle Vic find the Orchard Oriole nest on his farm. An evening search located it. Well hidden, it was suspended in a more sessile fashion than that of a Northern (Baltimore) Oriole, from the branch of a spruce tree 5 m above the ground. There were two young in the nest. My wife Mary and I went out to see this find the next day; Vic watched the adults feeding the two young, now out of the nest, on 16 and 18 July (*Blue Jay* 38:247).

Vic contributed one well-written book review to the *Blue Jay*. The book was titled *The World of the Bison* (*Blue Jay* 29:44-45, 1969). He also contributed one closeup photo of a Golden Eagle to illustrate an article written by Theresa Heuchert about a rehabilitated Golden Eagle (*Blue Jay* 30:257).

From the beginning, Vic played a quiet but active role in the Saskatoon Natural History Society. He was treasurer for three years, 1966 through 1968. At each annual meeting his treasurer's reports explained everything clearly but with a wry sense of humour that brought on giggles and much outright laughter. After two year's respite, he came back on the board as a director for another three years, 1971-73, making a total of six years' service on the



*Victor J. Harper with
Black-capped Chickadee Stan Shadick*

executive. For two of these years, Vic was also corresponding secretary for the provincial society.

In the days when fewer members showed their slides on Member's Night in January, Vic would modestly show some of his best. And they were good! Best of all was his low-key commentary, delivered with his wry sense of humour, again guaranteed to provoke gales of laughter.

Vic regularly attended meetings for another twenty years. His 90th birthday fortuitously occurred on a Natural History Society meeting night; the society members shared Vic's birthday cake, provided by Stan Shadick.

Vic's wisdom was evident in his choice of a wife, Vi Cairns. Another society member, John Shadick, was married to Vi's sister, Mary. Marg Belcher, the older Belcher sister and Mary Cairns, the younger Cairns sister, were special pals among the four women in a class of five in Education

at the University. The Cairns home was the "home away from home" where much table tennis was played. It was a joke for both families when Mary Belcher (my wife) chose to be the "big sister" to the older Vi Cairns, when Vi attended University classes somewhat late in life. Vi later took a Master's degree in library science and became the librarian at Mount Royal Collegiate in Saskatoon.

Through the Mount Royal contact, Vi and Vic encouraged a promising young student by the name of Al Smith, editor of the soon-to-be-published *Atlas of Saskatchewan Birds*.

The Harpers and Shadicks attended many meetings and outings together, whenever Vic's farm duties did not interfere. These included some of the Christmas bird counts, usually in the company of Mary and John Shadick.

Vi's death in August 1980 was a real blow to Vic. He quit farming in 1981 (he felt it permissible to retire as he came 81) and moved into Oliver Lodge the next year. He maintained his independence; when he was 90, and nephew Stan Shadick was busy elsewhere, Vic went alone on the bus to his brother's funeral at Kerrobert.

Vic was an unselfish pioneer who, in every sense, left the world a better place in which to live. The world is now in desperate need of men and women with his generosity, quiet wisdom, and ever-present sense of humour.

Editor's Note: One of Vic's poems appears in the poetry section.



BIRDS

53rd ANNUAL SASKATCHEWAN CHRISTMAS BIRD COUNT — 1994

Compiled by Wayne C. Harris, Box 414, Raymore, Saskatchewan. S0A 3J0

With unseasonably warm weather during the entire count period (17 December 1994 through 2 January 1995) it seemed less like Christmas than it has for a number of years. The southwest portion of the province was completely without snow while other areas, even though snow covered, were losing snow depth to the warm weather. The 88 counts completed this year were one less than last year and, in spite of the warm weather, the number of people participating dropped from 605 in 1993 to 597 this year. With the reduction in both the number of counts and participants a corresponding drop was inevitable in the number of hours accumulated — 1,006 compared to 1,120 last year.

Weather and Coverage

Table 1 summarizes the weather conditions reported on the counts. As indicated, the temperatures were unseasonably mild, with the average overnight low being -10°C and the daytime highs averaged -5°C . Turtle Lake had the dubious honour of having the coldest night at -30°C while Coronach basked in the mid-afternoon sun at $+12^{\circ}\text{C}$. The heaviest snow cover was reported from the east side — Hudson Bay reported the most with almost a metre on the ground. Many locations were without any snow. The average snow depth for the entire province was only 11 cm. Saskatchewan is noted for its windy weather but, as with everything else, the wind was a pleasant surprise — there was virtually none, with an overall average of only 8

kmph, which by Saskatchewan standards is almost dead calm.

The Birds

There were 94 species recorded on count day, with an additional four species during the count period giving an overall total of 98 species, the same as last year. The results are compiled in Tables 3, 4 and 5. The total number of birds seen totalled 112,685 individuals, higher than the almost 100,00 seen in 1990. The most abundant species was again the Snow Bunting with a total of 28,730 individuals reported. Surprisingly, the second most common species was the Mallard (26,168) which stayed in record numbers in the south where the lack of snow allowed them to continue to feed in the fields. House Sparrow (18,077), Bohemian Waxwing (11,382), Rock Dove (6,772), Canada Goose (3,491), Black-billed Magpie (3,319) and Black-capped Chickadee rounded out the list of species which exceeded 2,000 individuals on the counts.

Population trends of some of the most common species are provided in Table 7. The most substantial increases were for the semi-hardy species which linger longer when conditions are mild. Golden-crowned Kinglets experienced the biggest increase (1,423%). This is most encouraging and continues the general upward trend in their numbers since the massive winter die off in the late 1970s. Next on the list was Mallard (1,019%). Other species

which fit the semi-hardy category and had large increases were Northern Flicker (430%), Brown Creeper (236%), American Tree Sparrow (328%) and Red-winged Blackbird (289%). One species which one would have expected to increase with the lack of snow is the Horned Lark, but it actually decreased. Whether the decrease is real or an artifact of the birds feeding in the open fields instead of on the road-sides, which is the case when the fields are covered in snow, remains to be seen.

Grouse populations generally improved with both Ruffed and Spruce Grouse continuing upwards on track with their normal cyclic trends. Northern Goshawks which normally parallel the grouse populations were very scarce. Forest owls were virtually non-existent, with only single Great Gray and Hawk Owls and no Barred, Boreal or Saw-whets.

The lack of cones on the spruce trees was undoubtedly a factor in the decline in numbers of Red-breasted Nuthatch and both crossbill species. White-winged Crossbills were not even found during count day and appear only as an additional species.

Of the winter finches, only Pine Grosbeaks were present in good numbers, showing an overall increase. Redpolls and Evening Grosbeaks were less common, particularly the redpolls (Hoary Redpolls were absent from counts completely).

Rare Species

For the second year in a row, no new species were added to the all-time list. Table 4 lists the least frequent species on the counts and the rarest species are all in this table. The first Willow Ptarmigan in a number of years were found on the

McMahon Lakes count. It is not that this species is necessarily rare but a fact that few counts are carried out far enough north to find this species. Of the truly rare, the Varied Thrushes found at both Fort Walsh and Whitewood rank among the best. The Rufous-sided Towhee found at Skull Creek was only the fourth count record and follows two separate occurrences from last year. American Goldfinches were found in both Prince Albert and Saskatoon.

House Finches were reported from five separate counts, phenomenal considering they were a new species only two years ago. It is becoming obvious that the cold extremes of our winters are not going to stop the spread of this species which has expanded rapidly westward from eastern North America in the past ten years.

Table 6 provides a summary of new high counts recorded for species during the 1994 count. The Mallard high was 50% higher than the previous with over 15,000 seen at the Cookson Reservoir on the Coronach count. This same count turned in new records for Gadwall (3) and American Coot (23). Both eagle species had new records with 79 Bald Eagles at Squaw Rapids (19 in one tree!!!) and 17 Golden Eagles on the Grassland National Park count. The 22 Northern Flickers at Saskatoon were more than twice the previous high and the 11 Pileated Woodpeckers at Kamsack almost three times the previous high. Finally, of note were the 393 Common Ravens at Hudson Bay, many of which were at the garbage dump.

Count Areas and Participants

Names of compilers are in italics. Number of participants in each count are in parentheses following the names.

1. ABERNETHY-KATEPWA LAKE. *Ron Bittner, Ron Hooper, Joy McKen, Wanda Steuck.* (4)
2. ARMIT. *Valeri Harris, Wayne Harris.* (2)
3. ASSINIBOIA. *Ed Bearss, Jack Burgeson, Alec Duxbury, Cecil Hayward, Marjorie Lamb, Nelson Lamb, Delmar Pettem, Wilf Prentice, Ken Schweiler.* (9)
4. BANGOR. *Jean Hilton.* (1)
5. BETHUNE. *Doug and Vera Laing.* (2)
6. BIGGAR. *Roger Assailly, Guy Wapple, Morgan Wapple, Robert Wapple.* (4)
7. BIRCH HILLS. *Marg Mareschal, Moe Mareschal, Don Weidl.* (3)
8. BROMHEAD. *Martin Bailey, Carol Bjorklund.* (2)
9. CANDLE LAKE. *Burke Korol, Penny Pearse.* (2)
10. CHRISTOPHER LAKE. *Dorothy Bird.* (1)
11. CLARK'S CROSSING. *Barbara Brokx, Emile Brokx, Gail Bunt, Muriel Carlson, Adam Cooper, Don Doell, Bernie Gollop, Bob Johanson, Gerhard Lahey, Koji Maeda, Cliff Matthews, Mack Miller, Menno Nickel, Bruce Noton, Hilda Noton, Keith Pahl, Ann Pocknell, Wayne Shiels, Hilda Voth, Jim Wedgwood, Michael Williams, Jim Wood, Lois Wooding.* (23)
12. CORONACH. *Anne Harris, Valeri Harris, Wayne Harris.* (3)
13. CRAVEN. *Martin Bailey, Margaret Belcher, Andy Belyk, Al Binney, Betty Binnie, Carol Bjorklund, Doug Bradford, Dot Evans, Trevor Herriot, Phil Holloway, Phyllis Ilsley, Bob Kreba, Ferne Lawrence, Kevin Moore, Ron Myers, Bill Ogilvie, Curtis Pollack, Karyn Scalise.* (18)
14. CROOKED LAKE. *Bill Livesay, Mayta Livesay, Dorothy Skene, Ed Skene.* (4)
15. CROOKED RIVER. *Karl Mehler, Katherine Mehler, Kristine Mehler, Margaret Mehler, Morley Mehler, Phyllis Siemens.* (6)
16. DILKE. *Margaret Belcher, Brian McArton, Ken McArton, Bertha Wilson.* (4)
17. DUVAL. *Enid Cumming, George Herber, Linda Korytko, Kim McBride, Iain Richardson, Lloyd Saul.* (6)
18. EASTEND. *Henri Lebastard.* (1)
19. ENDEAVOUR. *Norman Harris.* (1)
20. FENTON. *Carman Dodge.* (1)
21. FIFE LAKE. *Martin Myers, Robert Rafuse.* (2)
22. FORT QU'APPELLE. *Elizabeth Aitken, James Armstrong, Phyllis Bordass, William Bordass, Errol Cochrane, J. Connors, Anne Davies, Doug Evans, Doug Harman, Ronald Hooper, Lois Lamontagne, Vic Lamontagne, Maurice Lindgren, Jack Lowe, Don McDougall, Jean McKenna, Alan Mlazgar, Webb Palmer, Paul Paquin, Helen Reimer, Doreen Rowell, Lorne Rowell, Lloyd Talbot, Gus Vanderpolder.* (24)
23. FORT WALSH. *Paul Chytyk, Anne Harris, Valeri Harris, Wayne Harris, Burke Korol, Wilkes Parsonage, John Pollock, Matt Smith, Guy Wapple.* (9)
24. GARDINER DAM. *Paul Chytyk, Anne Harris, Valeri Harris, Wayne Harris, Ron Jensen, Burke Korol, John Pollock, Matt Smith, Guy Wapple, Robert Wapple.* (10)
25. GOOD SPIRIT LAKE. *Bill Anaka, Joyce Anaka, Julia Wiwchar.* (3)
26. GOVENLOCK. *Paul Chytyk, Anne Harris, Valeri Harris, Wayne Harris, Burke Korol, John Pollock, Matt Smith, Guy Wapple.* (8)
27. GRASSLANDS NATIONAL PARK. *Paul Chytyk, Anne Harris, Valeri Harris, Wayne Harris, John Pollock.* (5)
28. GRASSLANDS NATIONAL PARK (NW). *Pat Fargey, Carol Masecar, Florence Miller, Mike Wynn, Miriam Wynn, Wake Wynn.* (6)
29. GRAYSON. *Charles Helm, Karl Zimmer, Steven Zimmer.* (3)
30. HANLEY. *Carman Dodge, Keith Dodge, Ken Dodge.* (3)
31. HEPBURN. *Phyllis Siemens.* (1)
32. HUDSON BAY. *Ian Daisley, John Daisley, Robert Daisley, Bruce Keyowski, Ryan Zens.* (5)
33. HUMBOLDT. *Ed Brockmeyer, Mike Volk.* (2)
34. HUMBOLDT. (West). *Bob Rafuse.* (1)
35. INDIAN HEAD. *Caroline Beatty, Jan Beattie, Denise Beaulieu, Margo*

- Beaulieu, Vic Beaulieu, Irv Escott, David Gehl, Roberta Gehl, Gordon Howe, *John Kort*, Mary Kort, Dora Nichols, Lorne Scott, Fred Skinner, Anne Willerth, Gordon Willerth. (16)
36. KAMSACK. John Barisoff, George and Mary Bernard, Agnes Betz, Mable Buceuk, Lindee Duwores, Barb Elasser, Mrs. R.E. Elasser, Gordon Els, Jay Fry, Anita Klocho, Bill Koroluk, Joyce McLean, Dallas, Kelsey and Riley Rezansoff, *Isabel Ritchie*, David and Elsie Severson, John Solmon, Elenor Sookocheff, Phyllis Ward. (20)
37. KELVINGTON. Pat Finnie, *Dianne Sloan*, Marguerite Sloan. (3)
38. KENASTON. *Lawrence Beckie*. (1)
39. KILWINNING. Alan Daku, *Ed Driver*, Marg Driver. (3)
40. KINDERSLEY. *Jean Harris*, Keith Harris. (2)
41. KINLOCH. *Don Forbes*, Frank Gabriel, Cliff Logan, Wilf Rodenberg. (4)
42. KUTAWAGAN LAKE. *Wayne Hamis*. (1)
43. LARONGE. *Jim Paul*, Lorie Ann Paul. (2)
44. LAST MOUNTAIN LAKE N.W.A. John Dunlop, Valeri Harris, *Wayne Hamis*. (3)
45. LEADER (North). *Daisy Meyers*. (1)
46. LEADER (South). John Flood, John Rauch, *Brenda Schnell*, Susan Springett. (4)
47. LIVELONG. *Sarah Pavka*. (1)
48. LUSELAND. *Kim Finley*, Estelle Finley, Kerwin Finley, Bill Frey, Brent Honeker, Shirley Honeker, Wyatt Martfeld. (7)
49. MACDOWALL. *Myron Barton*. (1)
50. MATADOR. Cindy Romo, *Jim Romo*. (2)
51. MCMAHON LAKES. *Daryl Johanneson*, Dan Poirier. (2)
52. MEADOW LAKE. Bill Caldwell, Janet Caldwell, Betty Ann Golly, Byron Golly, Stuart Golly, Tyler Golly, Anne Sequin, Randy Sequin, Robbie Sequin, *Bob Wilson*. (7)
53. MELFORT (A). *Frieda Markland*. (1)
54. MELFORT (B). *Phil Curry*. (1)
55. MELVILLE. Donna Alberts, *Marion MacLean*, Jeanette Olson, Ross Wotherspoon. (4)
56. MOOSE JAW. Andy and Vi Anderson, Edith Bell, Doug and Helen Brunsdon, Barry and Fern Dowse, Ed and Hartley Fredeen, Mary Jane Green, Al Gurnsey, Kerry Hanley, Eve King, Cy and *Leith Knight*, Gerald and Jean Lynn, Connie and Hugh McIntyre, Helen and Peter Norys, Gavina Reekie, Ed Walker. (23)
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78. SPRUCE HOME. *Sharon and Tom Dice*. (2)
79. SQUAW RAPIDS. Valeri Harris, *Wayne Harris*, Guy Wapple, Robert Wapple. (4)
80. SWIFT CURRENT. Evelyn Anderson, Peter Ashcroft, Lisa Dale, Hugh Henry, *Ron Jensen*, Arleyne Lawson, Doug Lawson, Laure Neish, Doris Thoreson, Neil Vandendort, Kaye Waters, John Weston, Pearl Weston. (13)
81. TISDALE. *Joyce Mohr*. (1)
82. TURTLE LAKE (A). Marie Robinson, *Merle Robinson*. (2)
83. TURTLE LAKE (B). Steve and Carol Burand, *Muriel Carlson*, Gil Heim, Marlene Kalanack, Hazel and Howard Newton, Marie and Merle Robinson, Clayton Thompson, Vicki Tollefson, Michael Williams. (12)
84. WAKAW LAKE. Alex Bergerman, Joe Bergerman, *Roman Bergerman*. (3)
85. WEYBURN. Leo Belanger, *Ray Belanger*, Greg Bobbitt, Jim Burge, Ross Douglas, Fred Garner, Dick Gutfriend, Grace Kurtz, Phil Layh, Ray Neville, Nick Postey, Keith Sakatch, Stew Stairmand, Doyle Thomas. (14)
86. WHITE BEAR. Daryl Jordheim, Floyd Jordheim, Ruby Jordheim, *Sig Jordheim*. (4)
87. WHITEWOOD. Cliff Ashfield, Pat Connolley, Mavis Kay, *Boyd Metzler*, John Pollock. (5)
88. YORKTON. Irma Esopenko, *Warren Hjertaas*, Geoff Rushowick, Patrick Rushowick, Dorothy Skene, Edward Skene. (6)

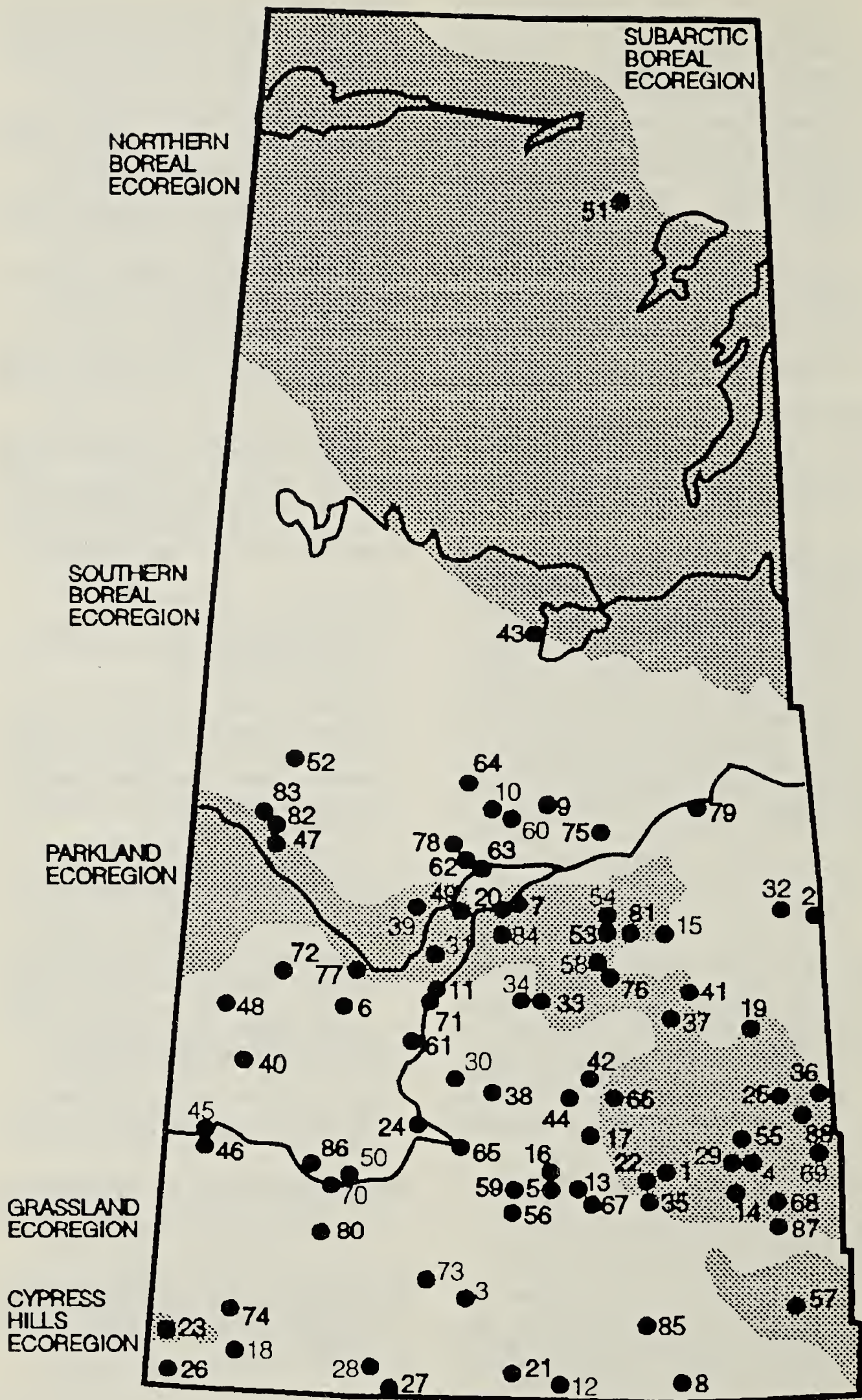


Figure 1. Location of 1994 counts (numbers correspond to locality names in Tables).

Table 1. COUNT WEATHER CONDITIONS (Temperature °C, Wind in kmph and Snow Cover in cm)

LOCALITY	Min. Temp	Max. Temp	Min. Wind	Max. Wind	Min. Snow	Max. Snow	Sky A.M.	Sky P.M.
1. ABERNETHY-KATEPWA LAKE	-8	+1	5	15	10	15	clear	clear
2. ARMIT	-26	-10	0	5	20	50	overcast, light snow	overcast, moderate snow
3. ASSINIBOIA	+10	+10	8	16	8	10	partly cloudy	partly cloudy
4. BANGOR	-6	0	10	12	5	8	mostly clear	mostly clear
5. BETHUNE	0	+2	10	15	5	10		clear
6. BIGGAR	-13	-11	20	40	2	10	partly cloudy, light fog	partly cloudy, light fog
7. BIRCH HILLS	-10	-8	3	10	8	20	overcast, moderate fog, light snow	overcast, moderate fog
8. BROMHEAD	-22	-7	5	20	0	8	clear	clear
9. CANDLE LAKE	-11	-7	0	5	15	25	partly cloudy	partly cloudy
10. CHRISTOPHER LAKE	-20	-16	2	15	30	45	clear	clear
11. CLARK'S CROSSING	-15	-9	0	20	1	15	overcast, moderate fog	mostly clear
12. CORONACH	-1	+12	0	10	0	0	clear	clear
13. CRAVEN	-12	-8	5	10	7	15	partly cloudy, fog	partly cloudy
14. CROOKED LAKE	-25	-22	15	20	15	20	clear	partly cloudy
15. CROOKED RIVER	-7	+5	0	0	15	15	clear	clear
16. DILKE	-19	-17	20	30	0	10	partly cloudy	clear
17. DUVAL	-12	-6	0	12	0	10	overcast	partly cloudy
18. EASTEND	-16	+8	0	0	4	6	mostly clear	partly cloudy
19. ENDEAVOUR	-10	0	0	0	12	15	overcast, moderate fog	overcast, light fog
20. FENTON	-13	-9	0	10	5	10	overcast, moderate fog, moderate snow	overcast
21. FIFE LAKE	+5	+10	0	5	0	0		clear
22. FORT QU'APPELLE	-12	-10	0	5	8	10	overcast, light fog	partly cloudy
23. FORT WALSH	-6	-2	0	20	0	10	mostly clear	mostly clear
24. GARDINER DAM	-10	-4	0	20	0	5	clear	partly cloudy
25. GOOD SPIRIT LAKE	-2	+4	15	20	8	12	mostly clear	mostly clear
26. GOVENLOCK	-1	+10	0	5	0	0	clear	clear
27. GRASSLANDS N.P.	-4	+5	0	10	0	0	mostly clear	mostly clear
28. GRASSLANDS N.P. (NW)	-2	+3	0	10	0	0	mostly clear	mostly clear
29. GRAYSON	+2	+6	0	5	0	20	partly cloudy	mostly clear
30. HANLEY	-10	-2	0	5	0	5	clear	clear
31. HEPBURN	-24	-15	0	0	0	10	clear	clear
32. HUDSON BAY	-10	-20	10	25	60	90	mostly clear	mostly clear
33. HUMBOLDT	-12	-5	0	0	6	10	heavy fog	heavy fog
34. HUMBOLDT (W)	-18	-15	0	0	15	20		overcast, moderate fog, light snow
35. INDIAN HEAD	-20	+3	0	20	5	10		
36. KAMSACK	-10	-8	0	20	15	20	overcast	partly cloudy
37. KELVINGTON	-23	-20	0	0	30	45	overcast, light fog	partly cloudy, light fog
38. KENASTON	-3	+1	12	16	0	3	clear	mostly clear
39. KILWINNING	-10	-1	0	11	0	10	fog	partly cloudy
40. KINDERSLEY	-10	-10	0	1	0	1	overcast, light fog	overcast, light fog
41. KINLOCH	0	+2	5	10	16	20	mostly clear	mostly clear
42. KUTAWAGAN LAKE	-8	-2	0	10	0	10	overcast	overcast
43. LARONGE	-5	-2	0	10	30	40	overcast, light snow	overcast
44. LAST MOUNTAIN LAKE N.W.A.	-10	-2	0	15	0	12	clear, light fog	overcast

Table 1. COUNT WEATHER CONDITIONS (continued)

LOCALITY	Min. Temp	Max. Temp	Min. Wind	Max. Wind	Min. Snow	Max. Snow	Sky A.M.	Sky P.M.
45. LEADER (North)	+1	+4	2	5	0	0	overcast	overcast
46. LEADER (South)	-10	-10	0	0	0	3	clear	clear
47. LIVELONG	-10	+4	0	0	20	25	clear	mostly clear
48. LUSELAND	-8	-1	0	10	1	4	overcast	partly cloudy
49. MACDOWALL	-22	-20	12	15	18	25	clear	clear
50. MATADOR	-7	-5	0	30	0	0	moderate fog	moderate fog
51. MCMAHON LAKES	-20	-15	5	10	30	40	partly cloudy	partly cloudy
52. MEADOW LAKE	-18	-10	0	10	15	30	clear	clear
53. MELFORT (A)	-7	-4	2	5	10	15	partly cloudy	mostly clear
54. MELFORT (B)	-18	-14	8	15	30	40	overcast, moderate fog, light snow	overcast, moderate fog
55. MELVILLE	-8	-2	0	0	8	10	mostly clear	mostly clear
56. MOOSE JAW	-3	+8	0	9	0	0	clear	overcast
57. MOOSE MOUNTAIN	-14	+3	0	20	0	10	clear	mostly clear
58. NAICAM	-4	-4	0	15	10	50	overcast	overcast
59. NICOLLE FLATS	-15	-12	10	15	0	5	mostly clear	mostly clear
60. PADDOCKWOOD	-8	-8	10	15	20	20	moderate fog	moderate fog
61. PIKE LAKE	-23	-13	25	28	5	10	mostly clear	partly cloudy
62. PRINCE ALBERT (A)	-24	-17	1	2	35	60	clear	clear
63. PRINCE ALBERT (B)	-12	-7	0	10	10	20		
64. PRINCE ALBERT N.P.	-15	-10	10	15	15	35	mostly clear	mostly clear
65. QU'APPELLE VALLEY DAM	-11	+4	0	10	0	8	partly cloudy	mostly clear
66. RAYMORE	-5	+4	0	10	0	15	partly cloudy	mostly clear
67. REGINA	-10	+1	5	15	10	25	partly cloudy, moderate fog	overcast
68. ROUND LAKE	-8	-1	0	0	0	12	overcast, moderate fog	partly cloudy
69. SALTCOATS	-2	+2	5	10	0	5	partly cloudy	partly cloudy
70. SASKATCHEWAN LANDING P.P.	-8	-4	20	30	0	0	overcast	overcast
71. SASKATOON	-16	-4	6	14	0	6	mostly clear	overcast
72. SCOTT	-18	-15	20	30	5	10	partly cloudy	overcast, light snow
73. SHAMROCK	-6	-6	5	35	0	0	overcast	overcast
74. SKULL CREEK	+4	+7	45	50	0	0	overcast	overcast
75. SNOWDEN	-17	-14	0	20	6	30	overcast, moderate snow	overcast, light snow
76. SPALDING	-5	-5	0	0	16	20	overcast	overcast
77. SPINNEY HILL	-9	-7	0	15	0	5	mostly clear	mostly clear
78. SPRUCE HOME	-15	-12	0	2	12	20	partly cloudy	light fog
79. SQUAW RAPIDS	-11	-2	0	10	25	30	partly cloudy	partly cloudy
80. SWIFT CURRENT	-6	-2	0	10	0	2	overcast	partly cloudy
81. TISDALE	-10	-8	0	0	10	15	partly cloudy	
82. TURTLE LAKE (A)	-30	-10	10	30	5	10	mostly clear	mostly clear, light fog
83. TURTLE LAKE (B)	-14	-12	5	12	10	30	overcast, light snow	mostly clear, light snow
84. WAKAW LAKE	+1	+4	5	10	5	8		partly cloudy
85. WEYBURN	-19	-6	0	5	8	14	overcast, moderate fog	overcast, moderate fog
86. WHITE BEAR	-8	-6	0	2	0	0	moderate fog	moderate fog
87. WHITEWOOD	-10	0	0	10	0	8	clear	mostly clear
88. YORKTON	-12	-10	15	40	5	25		

Table 2. COUNT COVERAGE (* indicates counts which conform to the North American standard of all-day counts covering a 15-mile diameter circle)

LOCALITY	FK	FH	VK	VH	FD	CO	MI	DE	AF	AP	NP	SP	CF	FY	UR	O	OT
1. ABERNETHY-KATEPWA L.																	
2. ARMIT*	2	2	75	3	4		26-50	26-50	26-50	5-25			5-25 <5	<5	26-50	<5	
3. ASSINIBOIA																	
4. BANGOR	2	1	12	1	3		5-25		26-50	26-50			5-25	51-75			5-25
5. BETHUNE			39	3					<5	<5	51-75			5-25		5-25	
6. BIGGAR*	11	5.5	210	10					26-50				5-25	5-25	26-50		
7. BIRCH HILLS	2	1	74	4	1				26-50	<5		<5	26-50	5-25	<5	<5	
8. BROMHEAD			145	5									>75	<5			
9. CANDLE LAKE*	2.8	1.8	166	6.2			26-50	26-50									
10. CHRISTOPHER LAKE	1	1			3		>75								<5		
11. CLARK'S CROSSING*	45	18.3	566.5	26.2		<5		5-25	5-25	<5	<5	<5	5-25	26-50	5-25	<5	<5
12. CORONACH	2	1	160	6							26-50		26-50	5-25	<5	26-50	
13. CRAVEN*	12	5	490	27	4				26-50	26-50	<5	<5	26-50	5-25	5-25	<5	
14. CROOKED LAKE	3	2	40	2.5	1.5			51-75			5-25					<5	
15. CROOKED RIVER			65	1	5				5-25					>75			
16. DILKE*	3	1.5	125	4.5					5-25	5-25	<5		5-25	<5	<5		<5
17. DUVAL	1.5	1	168	6	.5				26-50	5-25			26-50	5-25	5-25		
18. EASTEND							5-25										
19. ENDEAVOUR	3	1.5	30	1	3				<5	5-25		<5		26-50			
20. FENTON			165	3	1				<5	5-25			51-75	<5			
21. FIFE LAKE			75	3.5													
22. FORT QU'APPELLE	6	2	200	3				<5	26-50	5-25	<5		51-75	5-25	<5	5-25	<5
23. FORT WALSH*	40	20	177	12.5			26-50				<5		<5	5-25	5-25	5-25	<5
24. GARDINER DAM*	34	17	289	16.5									26-50	26-50		26-50	<5
25. GOOD SPIRIT LAKE*	2	1	105	4.5	5	<5	<5	26-50	26-50	51-75	<5	5-25	26-50	5-25	<5		
26. GOVENLOCK*	16	8	300	13													
27. GRASSLANDS N.P.*	3	2	200	5							51-75		26-50	26-50			
28. GRASSLANDS N.P. (NW)	8	4	150	5							51-75		5-25	5-25			
29. GRAYSON	5	1	47	3	1				26-50		26-50	26-50	5-25	5-25	5-25	5-25	
30. HANLEY	5	1	3	1	1								5-25	5-25	>75		

Abbreviations: FK = Km on Foot; FH = Hours on Foot; VK = Km by Vehicle; VH = Hours by Vehicle; FD = Hours at Feeders; CO = Coniferous Woods %; MI = Mixed Woods %; DE = Deciduous Woods %; AF = Aspen Grove/Farmland %; AP = Aspen Prairie %; NP = Native Prairie %; SP = Seeded Pasture %; CF = Cultivated Fields %; FY = Farnyard %; UR = Urban %; O = Open Water %; OT = Other %.

Table 2. COUNT COVERAGE (continued)

LOCALITY	FK	FH	VK	VH	FD	CO	MI	DE	AF	AP	NP	SP	CF	FY	UR	O	OT
31. HEPBURN			50	1.5	1		26-50		>75	5-25					26-50	<5	5-25
32. HUDSON BAY			30	5						5-25							
33. HUMBOLDT	10	1	77	5	1				26-50	5-25			51-75				
34. HUMBOLDT (W)	5	2.5	10	1.5					26-50	26-50	<5			26-50	<5	<5	
35. INDIAN HEAD	7	4	170	4	16					5-25							
36. KAMSACK																	
37. KELVINGTON			32	2	2				26-50				51-75	5-25	<5		
38. KENASTON	1	1	50	5	1				>75	5-25			5-25	5-25	<5		
39. KILWINNING	1	.5	96	5		5-25	5-25	5-25	5-25	5-25		26-50	26-50	<5	<5		
40. KINDERSLEY	1	.5	65	3	1					5-25		26-50	51-75				
41. KINLOCH	2.5	1.5	85	2	8	5-25	26-50	5-25	5-25					26-50			
42. KUTAWAGAN LAKE*	1	1	200	4							26-50		>75		26-50	<5	
43. LARONGE	3	1	92	4	1	5-25	26-50						5-25	>75	5-25		
44. LAST MOUNTAIN L. N.W.A.*		1	1	248	6			5-25		5-25	5-25		5-25	5-25			
45. LEADER (North)	6	4	60	2	2												
46. LEADER (South)				4	2						26-50		26-50	5-25	<5	<5	
47. LIVELONG	5	3	20	2	4		<5		5-25	<5	<5	<5	5-25	<5	>75		
48. LUSELAND	19	4	131	5	2				26-50				5-25	<5	5-25		
49. MACDOWALL			45	3	1	<5	5-25		51-75		26-50	<5	<5	<5			26-50
50. MATADOR	15	4	100	3.5									<5				
51. MCMAHON LAKES	3	3	30	3		51-75											26-50
52. MEADOW LAKE	2	2	159	5	4		26-50	26-50					5-25		5-25		
53. MELFORT (A)	5	2	16	3	2		5-25										
54. MELFORT (B)	.5	2	30	1	2				5-25	<5	<5		5-25	5-25	51-75		5-25
55. MELVILLE	2	1	30	1	2				5-25				5-25		5-25		
56. MOOSE JAW	15	8	93	4.5	3									26-50		5-25	26-50
57. MOOSE MOUNTAIN*	3	1.5	137	4				26-50	26-50					5-25	5-25		
58. NAICAM	1	.5	102	4					5-25				26-50	5-25			
59. NICOLLE FLATS	2	1	80	5				26-50	5-25	5-25	<5	<5	26-50	5-25	<5	<5	
60. PADDOCKWOOD	4	2	78	3	2		5-25		26-50				26-50	5-25			

Table 2. COUNT COVERAGE (continued)

LOCALITY	FK	FH	VK	VH	FD	CO	MI	DE	AF	AP	NP	SP	CF	FY	UR	O	OT
61. PIKE LAKE*	32	13.5	548	12.4	12		>75	26-50	5-25	5-25			5-25	26-50			
62. PRINCE ALBERT (A)				2	8			<5				<5	5-25	<5	>75		
63. PRINCE ALBERT (B)	4.5	2.5	166	12.3		<5		5-25					<5	<5	5-25	<5	
64. PRINCE ALBERT N.P.*	36	19	69	3.5	1	5-25	26-50		<5	5-25	5-25	<5	5-25	5-25	5-25		
65. QU'APPELLE VALLEY DAM*	5	4	190	6.3				26-50									
66. RAYMORE*	11	4	231	8	1			<5	5-25	26-50	<5	<5	26-50	5-25	<5	<5	
67. REGINA*	58	24	598	31.5	6				26-50	<5			26-50	<5	26-50		
68. ROUND LAKE	5	2	132	4	1				26-50	5-25			5-25	<5		5-25	
69. SALT COATS	2	2	93	6	1				26-50	26-50	51-75			5-25	5-25		<5
70. SASK. LANDING P.P.	2	1	105	6									26-50	<5		<5	<5
71. SASKATOON*	83	40.8	653	44.8	40.5								26-50	26-50	5-25		
72. SCOTT*	6	4	218	7	1								5-25	51-75	5-25		
73. SHAMROCK	1.5	.5	67	3					51-75	5-25	<5		5-25	5-25	5-25		
74. SKULL CREEK	10	5	100	4	3.5		<5		<5				<5	51-75	5-25		
75. SNOWDEN	2	1.5	156	4.5													
76. SPALDING	3	1	80	3	3		26-50						26-50	5-25	26-50		
77. SPINNEY HILL	.5	.2	130	6		<5	<5	26-50	26-50	<5	<5	<5	26-50	<5	<5	<5	
78. SPRUCE HOME	3	1	30	2	2		5-25		5-25				26-50	<5			
79. SQUAW RAPIDS*	27	14	86	11		5-25	26-50	5-25			5-25		<5	<5	<5		
80. SWIFT CURRENT	22	8	337	17	9.5								26-50				
81. TISDALE				1		<5		<5	<5				<5			<5	
82. TURTLE LAKE (A)							>75						5-25	26-50	<5		
83. TURTLE LAKE (B)	4	2	200	2		26-50	5-25	<5	5-25				<5	<5	<5		
84. WAKAW LAKE			15					5-25	26-50						5-25		
85. WEYBURN*	6.5	1.3	418	12.3	1	5-25	5-25	5-25	5-25	5-25		<5	26-50	<5	5-25		
86. WHITE BEAR	24	7	18	.5					26-50				<5	<5			>75
87. WHITEWOOD*	3	.5	244	7	7.5								5-25	26-50	5-25	26-50	
88. YORKTON	5	3	40	4	1										26-50		

Table 3-1. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												SPECIES
1. ABERNETHY-KATEPWA LAKE 19 December 1994	2. ARMIT 31 December 1994	3. ASSINIBOIA 2 January 1995	4. BANGOR 26 December 1994	5. BETHUNE 2 January 1995	6. BIGGAR 29 December 1994	7. BIRCH HILLS 17 December 1994	8. BROMHEAD 2 January 1995	9. CANDLE LAKE 20 December 1994	10. CHRISTOPHER LAKE 2 January 1995	11. CLARK'S CROSSING 17 December 1994	12. CORONACH 22 December 1994	
+										2760 15150 40 1	2760 15150 40 1	CANADA GOOSE MALLARD COMMON GOLDENEYE BALD EAGLE NORTHERN GOSHAWK
					1						9	ROUGH-LEGGED HAWK GOLDEN EAGLE MERLIN GYRFALCON PRAIRIE FALCON
5 3	7	63 5 22	6 2 21	2 7	2 3 59	27 1 34		3		10 158	61	GRAY PARTRIDGE RING-NECKED PHEASANT RUFFED GROUSE SHARP-TAILED GROUSE ROCK DOVE
+ 2	1 1 4 2	8 4	2 2 2	1	+ 1 1 1	+ 2 1 1	3 1			1 4 3 4	1	GREAT HORNED OWL SNOWY OWL DOWNY WOODPECKER HAIRY WOODPECKER THREE-TOED WOODPECKER
1	1 18 1					1 2 7	19					NORTHERN FLICKER PILEATED WOODPECKER HORNED LARK GRAY JAY BLUE JAY
6 14	13 82 7	38	3 3 8	3 3	101 8 16 2	15 7 28	5	21 111 40 31 1		229 56	7	BLACK-BILLED MAGPIE COMMON RAVEN BLACK-CAPPED CHICKADEE BOREAL CHICKADEE RED-BREASTED NUTHATCH
1 15					2 + 773 2				2			WHITE-BREASTED NUTHATCH GOLDEN-CROWNED KINGLET AMERICAN ROBIN BOHEMIAN WAXWING CEDAR WAXWING
1 +	335	25	50		17 541	2 173	2			1 51 1 274		NORTHERN SHRIKE EUROPEAN STARLING HARRIS' SPARROW DARK-EYED JUNCO SNOW BUNTING
	42		8	+	1 + 12	9		3	18	1 38 19		PURTY BLACKEIRD PINE GROSBEAK COMMON REDPOLL PINE SISKIN EVENING GROSBEAK HOUSE SPARROW
43 10 13 91 0 0	45 16 16 591 1 1	350 9 9 521 0 0	100 13 13 138 0 0	6 7 116 0 0	644 20 24 2189 0 0	158 19 20 576 1 1	175 9 9 510 35 1	14 13 13 260 4 1	30 11 14 99 0 1	1404 19 20 2600 0 0	110 14 14 18131 30 4	NO. SPECIES COUNT DAY NO. SPECIES COUNT PERIOD NO. INDIV COUNT DAY NO. INDIV. IN TABLE 4&5 NO. SPECIES IN TABLE 4&5

Table 3-2. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												
SPECIES	13 CRAVEN 17 December 1994	14. CROOKED LAKE 31 December 1994	15. CROOKED RIVER 24 December 1994	16. DILKE 31 December 1994	17. DUVAL 27 December 1994	18. EASTEND 2 January 1995	19. ENDEAVOUR 25 December 1994	20. FENTON 1 January 1995	21. FIFE LAKE 23 December 1994	22. FORT QU'APPELLE 17 December 1994	23. FORT WALSH 17 December 1994	24. GARDINER DAM 19 December 1994
CANADA GOOSE		2							500	1		15
MALLARD		2							5000	45	4	5722
COMMON GOLDENEYE										5		115
BALD EAGLE		1							4	2	10	31
NORTHERN GOSHAWK							+		+		1	
ROUGH-LEGGED HAWK									+		3	
GOLDEN EAGLE					1				8	+	2	3
MERLIN									+		1	
GYRFALCON												2
PRAIRIE FALCON									+			
GRAY PARTRIDGE						4			14		8	+
RING-NECKED PHEASANT						6			1		4	
RUFFED GROUSE		1					2			8	1	
SHARP-TAILED GROUSE	13		10	+	2				+	+	2	29
ROCK DOVE	53			17	21		+			4	1	179
GREAT HORNED OWL	3		1	+	2	2	1	1	1	+	4	3
SNOWY OWL			3	+	+			1				5
DOWNY WOODDPECKER	4	3	2	1	1	4		2	+	11	2	3
HAIRY WOODPECKER	3	2	2		1	2	3	3		8	2	4
THREE-TOED WOODPECKER											1	
NORTHERN FLICKER												
PILEATED WOODPECKER							2					
HORNED LARK	11			18		18			13			2
GRAY JAY							3					
BLUE JAY	12	2		+	3	6	2	1		14		6
BLACK-BILLED MAGPIE	150	17	1	20	21	18	21	6	4	27	98	124
COMMON RAVEN		2	1		1		50	2		5		
BLACK-CAPPED CHICKADEE	54	39	7	3	15	19	22	12	+	126	77	16
BOREAL CHICKADEE												
RED-BREASTED NUTHATCH												
WHITE-BREASTED NUTHATCH	6	3					+			19	4	
GOLDEN-CROWNED KINGLET	2										12	
AMERICAN ROBIN	8									+		
BOHEMIAN WAXWING	35	27		15				+		143	3	129
CEDAR WAXWING	49	16				10			+	+		
NORTHERN SHRIKE	4			+			1		+	1	6	
EUROPEAN STARLING										20	3	58
HARRIS' SPARROW												
DARK-EYED JUNCO										2		
SNOW BUNTING	142	3		+	25		75	130	+	83	41	40
RUSTY BLACKBIRD										2		
PINE GROSBEAK	2		15	+			12			+	7	7
COMMON REDPOLL						3				+	90	
PINE SISKIN										+		
EVENING GROSBEAK			16		+		36	12			1	
HOUSE SPARROW	565		20	69	373	100	13			401	131	1051
NO. SPECIES COUNT DAY	20	17	11	7	12	12	14	10	11	27	33	29
NO. SPECIES COUNT PERIOD	20	17	11	14	14	12	17	11	26	37	33	30
NO. INDIV. COUNT DAY	1120	127	78	143	466	192	243	170	5549	944	551	7763
NO. INDIV. IN TABLE 4&5	2	7	0	0	0	0	0	0	4	17	32	217
NO. SPECIES IN TABLE 4&5	1	3	0	0	0	0	0	0	7	8	6	7

Table 3-3. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												SPECIES
25. GOOD SPIRIT LAKE 20 December 1994	26. GOVENLOCK 18 December 1994	27. GRASSLANDS N. P. 20 December 1994	28. GRASSLANDS N.P. (NW) 23 December 1994	29. GRAYSON 25 December 1994	30. HANLEY 24 December 1994	31. HEPBURN 31 December 1994	32. HUDSON BAY 20 December 1994	33. HUMBCOLDT 26 December 1994	34. HUMBCOLDT 26 December 1994	35. INDIAN HEAD 22 December 1994	36. KAMISACK 26 December 1994	
				2						56		CANADA GOOSE
										1		MALLARD
	3									2		COMMON GOLDENEYE
												BALD EAGLE
+								+			1	NORTHERN GOSHAWK
	1											ROUGH-LEGGED HAWK
	5	17									1	GOLDEN EAGLE
		1										MERLIN
	3	1	1									GYRFALCON
												PRAIRIE FALCON
	13	13	22					26	12	11		GRAY PARTRIDGE
	24	3										RING-NECKED PHEASANT
1				2			1		2		20	RUFFED GROUSE
+	65	3	31	28	2			6	1	29	20	SHARP-TAILED GROUSE
18								500		55		ROCK DOVE
4	16	1	1	1				+		4	1	GREAT HORNED OWL
	4	1		1				+	1	3	1	SNOWY OWL
9				3		2		2		8	11	DOWNY WOODDPECKER
10				3				1		7	9	HAIRY WOODPECKER
												THREE-TOED WOODPECKER
1										1		NORTHERN FLICKER
	248	31	5								11	PILEATED WOODPECKER
+												HORNED LARK
6				1		+	7	+		33	1	GRAY JAY
											49	BLUE JAY
24	23	34	30	5	1		13	3	10	55	23	BLACK-BILLED MAGPIE
27					4		393	+		10	61	COMMON RAVEN
45				35	2	3	36	19	4	69	130	BLACK-CAPPED CHICKADEE
												BOREAL CHICKADEE
							11	1		2	1	RED-BREASTED NUTHATCH
2								1		4	17	WHITE-BREASTED NUTHATCH
												GOLDEN-CROWNED KINGLET
										6		AMERICAN ROBIN
22				4	12	110			30	22	100	BOHEMIAN WAXWING
								450		121	40	CEDAR WAXWING
+	1	1							1	1		NORTHERN SHRIKE
8	6	30										EUROPEAN STARLING
												HARRIS' SPARROW
	1									1	33	DARK-EYED JUNCO
7	33	130						6		340	100	SNOW BUNTING
	1	2								2		RUSTY BLACKBIRD
45							6	14			141	PINE GROSBEAK
											21	COMMON REDPOLL
											40	PINE SISKIN
4							51				324	EVENING GROSBEAK
52	926	110		21	257	6	1	20		108	119	HOUSE SPARROW
17	19	17	7	12	6	3	9	13	9	30	25	NO. SPECIES COUNT DAY
22	19	17	7	12	6	4	9	18	9	30	25	NO. SPECIES COUNT PERIOD
285	1425	391	94	106	278	121	519	1049	67	958	1275	NO. INDIV. COUNT DAY
0	52	12	3	0	0	0	0	0	0	7	0	NO. INDIV. IN TABLE 4&5
1	2	2	1	0	0	0	0	0	0	5	0	NO. SPECIES IN TABLE 4&5

Table 3-4. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												
SPECIES	37. KELVINGTON 31 December 1994	38. KENASTON 19 December 1994	39. KILWINNING 19 December 1994	40. KINDERSLEY 26 December 1994	41. KINLOCH 23 December 1994	42. KUTAWAGAN LAKE 27 December 1994	43. LARONGE 26 December 1994	44. LAST MOUNTAIN L. N.W.A 26 December 1994	45. LEADER (North) 26 December 1994	46. LEADER (South) 31 December 1994	47. LIVE LONG 20 December 1994	48. LUSELAND 26 December 1994
CANADA GOOSE												
MALLARD		2										
COMMON GOLDENEYE												
BALD EAGLE										1		
NORTHERN GOSHAWK			1		1							
ROUGH-LEGGED HAWK								1				
GOLDEN EAGLE						1		2	1			
MERLIN												
GYRFALCON	+							+				+
PRAIRIE FALCON				1								
GRAY PARTRIDGE			14			7			6	13		6
RING-NECKED PHEASANT									2	1		
RUFFED GROUSE	3				2							
SHARP-TAILED GROUSE		22	3			14		84		2		2
ROCK DOVE	8	41	5	20	4	46		399	28	14	30	67
GREAT HORNED OWL	+	+	2	1	+	2		4				1
SNOWY OWL		+		1		1		6		2		+
DOWNY WOODDPECKER	1		1				1	+	2	1	4	+
HAIRY WOODPECKER	2		1		6		2			1	6	4
THREE-TOED WOODPECKER												
NORTHERN FLICKER			1							1		
PILEATED WOODPECKER			1									
HORNED LARK		+		1		3				254		3
GRAY JAY			2		11		11				+	
BLUE JAY	2	3	5		16		6			3	8	9
BLACK-BILLED MAGPIE	20	8	32	5	8	63	2	71	32	73		58
COMMON RAVEN	12		13		8		114				6	
BLACK-CAPPED CHICKADEE	18	3	13		27		15	1	2		25	14
BOREAL CHICKADEE			5		2		2					
RED-BREASTED NUTHATCH							1				+	
WHITE-BREASTED NUTHATCH					3							
GOLDEN-CROWNED KINGLET												
AMERICAN ROBIN										3	1	
BOHEMIAN WAXWING	100	25		+	25		27	21	14		30	71
CEDAR WAXWING										8		
NORTHERN SHRIKE			1									
EUROPEAN STARLING	2		2									27
HARRIS' SPARROW		+		1								
DARK-EYED JUNCO								1			2	
SNOW BUNTING	529	5000	194	6	+	175		1683			50	31
MUSTY BLACKBIRD					1							
PINE GROSBEAK	4		28		15		20	2			60	
COMMON REDPOLL			4				16				30	25
PINE SISKIN			2		+							
EVENING GROSBEAK	25		37		36		33				50	
HOUSE SPARROW	20	37	61	50	10	431		620	7		25	141
NO. SPECIES COUNT DAY	14	9	23	9	16	10	14	15	9	14	14	17
NO. SPECIES COUNT PERIOD	16	13	23	10	19	10	14	17	9	14	16	19
NO. INDIV. COUNT DAY	746	5141	428	86	175	743	251	2920	94	377	327	463
NO. INDIV. IN TABLE 4&5	0	0	0	0	0	0	1	24	0	0	0	4
NO. SPECIES IN TABLE 4&5	0	0	0	0	0	0	1	2	0	0	0	3

Table 3-5. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												
49. MACDOWALL 2 January 1995	50. MATADOR 27 December 1994	51. MCMAHON LAKES 20 December 1994	52. MEADOW LAKE 26 December 1994	53. MELFORT (A) 26 December 1994	54. MELFORT (B) 30 December 1994	55. MELVILLE 26 December 1994	56. MOOSE JAW 26 December 1994	57. MOOSE MOUNTAIN 22 December 1994	58. NAICAM 29 December 1994	59. NICOLLE FLATS 2 January 1995	60. PADDOCKWOOD 26 December 1994	
							1 2					SPECIES
												CANADA GOOSE MALLARD COMMON GOLDENEYE BALD EAGLE NORTHERN GOSHAWK
							1					ROUGH-LEGGED HAWK GOLDEN EAGLE MERLIN GYRFALCON PRAIRIE FALCON
	12 37 2		2				10 3 428		12 4 7	15 10		GRAY PARTRIDGE RING-NECKED PHEASANT RUFFED GROUSE SHARP-TAILED GROUSE ROCK DOVE
1 1	+ 1	1 4 1	1 1	2 1	2	2	3 9 4 +	7 8	1 +	1 1	3	GREAT HORNED OWL SNOWY OWL DOWNY WOODPECKER HAIRY WOODPECKER THREE-TOED WOODPECKER
	5		6 3				8 1 5	1 12 8		14	2 2	NORTHERN FLICKER PILEATED WOODPECKER HORNED LARK GRAY JAY BLUE JAY
12 7 12	26 4	4	19 69 19	10 4 5	4 3 3	3 2 12	46 28	13 70	24 3 6	22 7	7 14 4	BLACK-BILLED MAGPIE COMMON RAVEN BLACK-CAPPED CHICKADEE BOREAL CHICKADEE RED-BREASTED NUTHATCH
				400	47	17	5	4 28	1 9	1 107		WHITE-BREASTED NUTHATCH GOLDEN-CROWNED KINGLET AMERICAN ROBIN BOHEMIAN WAXWING CEDAR WAXWING
143	174	20	20		50		2 1 1			+ 7	374	NORTHERN SHRIKE EUROPEAN STARLING HARRIS' SPARROW DARK-EYED JUNCO SNOW BUNTING
13			1 22 12 21			4	8 1 1	6	2		6 10 35	RUSTY BLACKBIRD PINE GROSBEAK COMMON REDPOLL PINE SISKIN EVENING GROSBEAK HOUSE SPARROW
8 9 191 0 0	7 8 259 0 0	4 4 45 20 1	14 14 200 0 0	8 8 697 0 0	8 9 222 0 1	8 8 67 0 0	23 25 911 3 2	13 13 302 0 0	11 13 166 0 0	11 11 197 0 0	10 10 457 0 0	NO. SPECIES COUNT DAY NO. SPECIES COUNT PERIOD NO. INDIV. COUNT DAY NO. INDIV. IN TABLE 4&5 NO. SPECIES IN TABLE 4&5

Table 3-6. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												
SPECIES	61. PIKE LAKE 2 January 1995	62. PRINCE ALBERT (A) 2 January 1995	63. PRINCE ALBERT (B) 18 December 1994	64. PRINCE ALBERT N.P. 18 December 1994	65. QU'APPELLE VALLEY DAM 18 December 1994	66. RAYMCORE 25 December 1994	67. REGINA 26 December 1994	68. ROUND LAKE 27 December 1994	69. SALTCOATS 24 December 1994	70. SASK. LANDING P P 28 December 1994	71. SASKATOON 26 December 1994	72. SCOTT 30 December 1994
CANADA GOOSE							105				29	
MALLARD					36		132	+		5	5	
COMMON GOLDENEYE					13			+			630	
BALD EAGLE					2			1		1		
NORTHERN GOSHAWK				+							+	
ROUGH-LEGGED HAWK					1		1				2	
GOLDEN EAGLE					2							
MERLIN	1		1			+	+			5	3	
GYRFALCON										1	+	
PRAIRIE FALCON												
GRAY PARTRIDGE	6					7	45			48	21	10
RING-NECKED PHEASANT							1				2	
RUFFED GROUSE	5	3		16		2			2			
SHARP-TAILED GROUSE	9				37	36				2	33	
ROCK DOVE	35		362		23	117	1231	11	18		1856	54
GREAT HORNED OWL	2	+			+	3	7	+	1		13	2
SNOWY OWL	+				9	1	26				+	
DOWNY WOODDPECKER	14	2	1	1	1	2	2	3	2		19	
HAIRY WOODPECKER	22	2		2	2	1	1	7	5		14	1
THREE-TOED WOODPECKER				1								
NORTHERN FLICKER	+						12				22	
PILEATED WOODPECKER				1								
HORNED LARK						7				7		1
GRAY JAY				22								
BLUE JAY	28	2	9			1	10	4	4		69	1
BLACK-BILLED MAGPIE	94	3	36	5	48	162	141	10	6	34	483	58
COMMON RAVEN	13	6	95	17		3		3	6		1	3
BLACK-CAPPED CHICKADEE	179	10	13	19	8	17	20	81	34	2	336	5
BOREAL CHICKADEE				23								5
RED-BREASTED NUTHATCH		1		+			8				25	
WHITE-BREASTED NUTHATCH	4	2	1	1			5	9	2		2	
GOLDEN-CROWNED KINGLET						1	2				14	5
AMERICAN ROBIN	11					+	3	11			2	
BOHEMIAN WAXWING	537		6686		153	13		28	50		604	442
CEDAR WAXWING	2						37	84			111	
NORTHERN SHRIKE						+						
EUROPEAN STARLING					3	3		+		3	85	
HARRIS' SPARROW												
DARK-EYED JUNCO			2			2	12		2		3	
SNOW BUNTING	17				137	3	13039				950	585
RUSTY BLACKBIRD						1	6					
PINE GROSBEAK	45	5	22		3	42	6	8	8		74	
COMMON REDPOLL											31	
PINE SISKIN							+				94	
EVENING GROSBEAK	9	20	21	15		+		36	1		2	
HOUSE SPARROW	108		211		222	718	1079		75	22	1591	194
NO. SPECIES COUNT DAY	20	10	14	13	20	21	2	14	15	14	37	15
NO. SPECIES COUNT PERIOD	22	11	14	15	21	25	33	22	15	14	43	15
NO. INDIV. COUNT DAY	1145	56	7461	125	704	1142	15950	296	216	136	7206	1367
NO. INDIV. IN TABLE 4&5	0	0	1	2	3	0	19	0	0	6	9	1
NO. SPECIES IN TABLE 4&5	0	0	1	1	2	0	7	3	0	3	9	1

Table 3-7. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

LOCATION AND DATE												SPECIES
73. SHAMROCK 27 December 1994	74. SKULL CREEK 26 December 1994	75. SNOWCEN 30 December 1994	76. SPALDING 26 December 1994	77. SPINNEY HILL 27 December 1994	78. SPRUCE HOME 27 December 1994	79. SQUAW RAPIDS 23 December 1994	80. SWIFT CURRENT 18 December 1994	81. TISDALE 26 December 1994	82. TURTLE LAKE (A) 1 January 1995	83. TURTLE LAKE (B) 30 December 1994	84. WAKAW LAKE 22 December 1994	
	+					1 1 281 79 1			75 3			CANADA GOOSE MALLARD COMMON GOLDENEYE BALD EAGLE NORTHERN GOSHAWK
	3 1						1 2		1 2			ROUGH-LEGGED HAWK GOLDEN EAGLE MERLIN GYRFALCON PRAIRIE FALCON
	16 6 13 29		1 5	6 10		6 5	4 1 1 172		7 7	4 6		GRAY PARTRIDGE RING-NECKED PHEASANT RUFFED GROUSE SHARP-TAILED GROUSE ROCK DOVE
1	8 4 4	+ 6 10 +	2 +	1 2 1	1	1 10 3	3 1 2	1	1 1 15 12	4 9		GREAT HORNED OWL SNOWY OWL DOWNY WOODPECKER HAIRY WOODPECKER THREE-TOED WOODPECKER
14	3 12 5	11 20		1 6 3	+ 2	8 30 13	5 2		2 5 12	2 12	1	NORTHERN FLICKER PILEATED WOODPECKER HORNED LARK GRAY JAY BLUE JAY
9	34 76	28 148 92 8	5 2 2 1	41 21	 2 10	35 173 31 2 2	92 1 6	4 7	4 15 20 5	27 38 67 5	1 5 13	BLACK-BILLED MAGPIE COMMON RAVEN BLACK-CAPPED CHICKADEE BOREAL CHICKADEE RED-BREASTED NUTHATCH
	72	4 +				4 2 5	1 1 3		4	2	25	WHITE-BREASTED NUTHATCH GOLDEN-CROWNED KINGLET AMERICAN ROBIN BOHEMIAN WAXWING CEDAR WAXWING
	3 2 180	 171	+	1 755	 +	4 1 331	10 1		 25	 85	6	NORTHERN SHRIKE EUROPEAN STARLING HARRIS' SPARROW DARK-EYED JUNCO SNOW BUNTING
	1 15	2 78 247 46	 +	12 2 9 56	4 +	1 53 36 12 67	12		40 50	1 75 6 36	7	RUSTY BLACKBIRD PINE GROSBEAK COMMON REDPOL PINE SISKIN EVENING GROSBEAK HOUSE SPARROW
4 4 796 0 0	27 29 653 12 5	15 18 881 0 0	8 11 43 0 0	17 17 928 1 1	5 8 19 0 0	35 35 1212 14 6	23 24 1757 4 4	5 5 42 0 0	22 22 311 5 1	16 16 379 0 0	7 7 58 0 0	NO. SPECIES COUNT DAY NO. SPECIES COUNT PERIOD NO. INDIV. COUNT DAY NO. INDIV. IN TABLE 4&5 NO. SPECIES IN TABLE 4&5

Table 3-8. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = species seen during the count period but not on count day)

SPECIES	LOCATION AND DATE				TOTAL INDIVIDUALS	NO OF COUNTS COUNT DAY	NO OF COUNTS COUNT PERIOD
	85. WEYBURN 17 December 1994	86. WHITE BEAR 27 December 1994	87. WHITEWOOD 18 December 1994	88. YORKTON 28 December 1994			
CANADA GOOSE					3491	11	11
MALLARD				6	26168	15	18
COMMON GOLDENEYE					1086	8	9
BALD EAGLE		2			143	14	15
NORTHERN GOSHAWK					8	7	13
ROUGH-LEGGED HAWK		+			9	6	8
GOLDEN EAGLE	+	2			59	16	18
MERLIN	1				20	12	15
GYRFALCON					3	2	6
PRAIRIE FALCON		+			6	4	6
GRAY PARTRIDGE	42	22	12	11	572	36	37
RING-NECKED PHEASANT	3	5			67	15	15
RUFFED GROUSE					104	25	25
SHARP-TAILED GROUSE	+		7		587	36	41
ROCK DOVE	238	170	52	+	6772	54	56
GREAT HORNED OWL	1	+	1	1	122	45	58
SNOWY OWL	4	+	1		103	32	42
DOWNY WOODPECKER	1	1	5	+	196	58	63
HAIRY WOODPECKER	2		7		230	52	54
THREE-TOED WOODPECKER					8	5	6
NORTHERN FLICKER	1		1		57	12	23
PILEATED WOODPECKER					29	10	13
HORNED LARK	27		1		738	28	29
GRAY JAY					148	15	18
BLUE JAY	1	1	7	+	434	50	55
BLACK-BILLED MAGPIE	75	103	70	31	3319	82	82
COMMON RAVEN				18	1583	48	49
BLACK-CAPPED CHICKADEE	2		78	15	2370	74	75
BOREAL CHICKADEE					101	13	13
RED-BREASTED NUTHATCH			2		63	13	15
WHITE-BREASTED NUTHATCH	1		1		115	30	31
GOLDEN-CROWNED KINGLET	+				41	9	10
AMERICAN ROBIN			3	1	50	11	15
BOHEMIAN WAXWING			4	1	11382	43	46
CEDAR WAXWING			+	492	1460	17	20
NORTHERN SHRIKE			4		25	13	17
EUROPEAN STARLING	135	5	+	47	528	24	27
HARRIS' SPARROW			1	2	7	5	6
DARK-EYED JUNCO	1	+			67	17	18
SNOW BUNTING	5	40	1120		28730	53	60
RUSTY BLACKBIRD					23	14	15
PINE GROSBEAK					1044	44	47
COMMON REDPOLL					315	15	16
PINE SISKIN	26		+		165	6	11
EVENING GROSBEAK	2				1394	32	35
HOUSE SPARROW	1054	250	217	177	18077	69	69
NO. SPECIES COUNT DAY	22	12	23	12			
NO. SPECIES COUNT PERIOD	25	18	29	15			
NO. INDIV. COUNT DAY	1593	602	1604	802			
NO. INDIV. IN TABLE 4&5	18	1	14	0			
NO. SPECIES IN TABLE 4&5	2	2	6	0			

Table 4. SPECIES SEEN ON FIVE OR FEWER COUNTS

SPECIES	LOCATION AND NUMBER
TUNDRA SWAN GREEN-WINGED TEAL AMERICAN BLACK DUCK NORTHERN PINTAIL NORTHERN SHOVELER	Indian Head (2) Fife Lake (1), Qu'Appelle Valley Dam (2), Saskatchewan Landing P.P. (4), Saskatoon (1) Regina (2) Fort Qu'Appelle (1) Crooked Lake (5)
GADWALL AMERICAN WIDGEON REDHEAD LESSER SCAUP BUFFLEHEAD	Coronach (3) Coronach (2) Fort Qu'Appelle (1) Crooked Lake (1), Fort Qu'Appelle (11), Round Lake (+), Squaw Rapids (1) Coronach (2), Fort Qu'Appelle (1), Indian Head (1), Round Lake (+), Saskatoon (1)
COMMON MERGANSER RED-BREASTED MERGANSER RUDDY DUCK TURKEY VULTURE NORTHERN HARRIER	Fort Qu'Appelle (1), Gardiner Dam (209), Saskatoon (1), Squaw Rapids (5) Gardiner Dam (1) Gardiner Dam (1), Squaw Rapids (2) Crooked Lake (1) Fife Lake (+), Govenlock (1), Last Mountain Lake W.M.A. (1), Luseland (2)
SHARP-SHINNED HAWK COOPER'S HAWK RED-TAILED HAWK SPRUCE GROUSE WILLOW PTARMIGAN	White Bear (+) Indian Head (1) Melfort (B) (+), Moose Jaw (+) Candle Lake (4), Christopher Lake (+), La Ronge (1), Squaw Rapids (4), Turtle Lake (A) (5) McMahon Lakes (20)
SAGE GROUSE WILD TURKEY AMERICAN COOT COMMON SNIPE HERRING GULL	Govenlock (51) Fort Walsh (1) Coronach (23), Fife Lake (3) Qu'Appelle Valley Dam (1), Saskatchewan Landing P.P. (1) Gardiner Dam (3)
GLAUCOUS GULL MOURNING DOVE NORTHERN HAWK-OWL GREAT GRAY OWL SHORT-EARED OWL	Gardiner Dam (1) Regina (+), Skull Creek (1), Swift Current (2), White Bear (1) Squaw Rapids (1) Whitewood (+) Fife Lake (+), Last Mountain Lake W.M.A. (23)
BLACK-BACKED WOODPECKER AMERICAN CROW BROWN CREEPER TOWNSEND'S SOLITAIRE VARIED THRUSH	Armit (1), Prince Albert N.P. (2), Saskatoon (+), Scott (1), Squaw Rapids (1) Fort Qu'Appelle (+), Moose Jaw (3), Saskatoon (1) Fort Walsh (1), Luseland (1), Regina (2), Swift Current (1), Whitewood (1) Gardiner Dam (1), Swift Current (1) Fort Walsh (1), Whitewood (+)
LOGGERHEAD SHRIKE RUFIOUS-SIDED TOWHEE AMERICAN TREE SPARROW SONG SPARROW WHITE-THROATED SPARROW	Fife Lake (+) Skull Creek (1) Fort Walsh (11), Gardiner Dam (2), Indian Head (2), Skull Creek (8) Saskatchewan Landing P.P. (1), Skull Creek (1) Birch Hills (1), Indian Head (1), Regina (1), Saskatoon (1)
LAPLAND LONGSPUR RED-WINGED BLACKBIRD WESTERN MEADOWLARK BREWER'S BLACKBIRD COMMON GRACKLE	Bromhead (35), Fife Lake (+), Grasslands N.P. (1), Grasslands N.P. (NW) (3) Grasslands N.P. (11), Swift Current (+), Whitewood (3) Fife Lake (+), Skull Creek (1) Craven (2) Fort Qu'Appelle (1), Luseland (1), Weyburn (2)
BROWN-HEADED COWBIRD ROSY FINCH PURPLE FINCH HOUSE FINCH RED CROSSBILL	Whitewood (6) Fort Walsh (16), Good Spirit Lake (+) Fort Qu'Appelle (1), Round Lake (+), Spinney Hill (1) Fort Qu'Appelle (+), Regina (14), Saskatoon (+), Weyburn (16), Whitewood (4) Fort Walsh (2), Regina (+), Saskatoon (4)
WHITE-WINGED CROSSBILL AMERICAN GOLDFINCH	Regina (+) Prince Albert (B) (1), Saskatoon (+)

Table 5. BIRDS NOT IDENTIFIED TO SPECIES

SPECIES	LOCATION AND NUMBER
EAGLE species LARGE FALCON species WOODPECKER species WAXWING species REDPOLL species	Last Mountain Lake W.M.A. (1) Gardiner Dam (1), Grasslands N.P. (1), Grasslands N.P. (NW) (1), Matador (1), Qu'Appelle Valley Dam (1) Pike Lake (4) Saskatoon (71) Craven (2)

Table 6. SUMMARY OF NEW OR TYING HIGH COUNTS ESTABLISHED DURING 1994 COUNTS (tying counts regular type; boldface/italic indicates a new record)

LOCATION	1993 COUNT	SPECIES COUNT	PREVIOUS HIGH	LOCATION AND YEAR
Regina <i>Coronach</i> <i>Coronach</i> <i>Squaw Rapids</i> <i>Luseland</i>	2 15150 3 79 2	Am. Black Duck <i>Mallard</i> <i>Gadwall</i> <i>Bald Eagle</i> <i>Northern Harrier</i>	2 10000 2 52 1	Regina '92 <i>Fife Lake '90</i> <i>Regina '61</i> <i>Squaw Rapids '81</i> <i>several counts n. to Harris, Hawarden</i>
Indian Head <i>Grasslands N.P.</i> <i>Coronach</i> Last Mt. Lake <i>Saskatoon</i>	1 17 23 23 22	Cooper's Hawk <i>Golden Eagle</i> <i>American Coot</i> Short-eared Owl <i>Northern Flicker</i>	1 14 14 23 9	12 counts n. to Kamsack, North Battleford <i>Fort Walsh '87</i> <i>Estevan '92</i> Regina '69 <i>Saskatoon '90</i>
<i>Kamsack</i> <i>Hudson Bay</i> Fort Walsh Skull Creek Prince Albert	11 393 1 1 1	<i>Pileated Woodpecker</i> <i>Common Raven</i> Varied Thrush Rufous-sided Towhee American Goldfinch	4 279 1 1 1	<i>Kamsack '93</i> <i>Nipawin '93</i> n. to Saskatoon Moose Jaw '63, Fort Qu'Appelle '93, Leader '93 Saskatoon '79, Regina '81, Craven '93

Table 7. COMPARISON OF THE 1994 POPULATIONS TO 1993 AND AVERAGE PAST YEARS (1989-1993) BASED ON PARTY HOURS PER INDIVIDUAL

SPECIES	94 vs 93	94 vs 5YR
CANADA GOOSE	23.6	233.5
MALLARD	1019.7	300.5
COMMON GOLDENEYE	-11.5	103.8
BALD EAGLE	104.5	311.1
NORTHERN GOSHAWK	-44.0	-58.7
GOLDEN EAGLE	40.1	50.2
MERLIN	178.6	95.8
PRAIRIE FALCON	124.0	-16.1
GRAY PARTRIDGE	-20.6	-50.4
RING-NECKED PHEASANT	8.3	-55.2
SPRUCE GROUSE	678.4	138.2
RUFFED GROUSE	152.2	49.1
SHARP-TAILED GROUSE	49.9	-37.0
ROCK DOVE	19.3	41.1
GREAT HORNED OWL	64.0	41.8
SNOWY OWL	57.4	63.7
SHORT-EARED OWL	0.0	62.2
DOWNY WOODPECKER	-2.4	-11.1
HAIRY WOODPECKER	2.2	4.8
THREE-TOED WOODPECKER	28.0	63.4
NORTHERN FLICKER	430.1	291.8
PILEATED WOODPECKER	40.7	53.5
HORNED LARK	-79.9	-79.1
GRAY JAY	32.1	45.3
BLUE JAY	19.6	14.4
BLACK-BILLED MAGPIE	24.4	20.0
COMMON RAVEN	14.8	32.9
BLACK-CAPPED CHICKADEE	13.1	13.4
BOREAL CHICKADEE	17.4	39.2
RED-BREASTED NUTHATCH	-71.1	-50.4
WHITE-BREASTED NUTHATCH	22.1	10.6
BROWN CREEPER	236.0	59.4
GOLDEN-CROWNED KINGLET	1423.2	116.7
AMERICAN ROBIN	-64.2	2.1
BOHEMIAN WAXWING	386.5	81.8
CEDAR WAXWING	44.5	376.0
NORTHERN SHRIKE	85.9	10.2
EUROPEAN STARLING	131.0	219.3
AMERICAN TREE SPARROW	327.5	-22.5
DARK-EYED JUNCO	-61.7	-22.0
LAPLAND LONGSPUR	-91.5	-97.7
SNOW BUNTING	26.8	59.6
RED-WINGED BLACKBIRD	289.2	15.4
RUSTY BLACKBIRD	11.5	-20.5
PINE GROSBEEK	275.7	25.2
RED CROSSBILL	-44.0	-75.7
WHITE-WINGED CROSSBILL	-100.0	-100.0
COMMON REDPOLL	-74.0	-73.2
HOARY REDPOLL	-100.0	-100.0
PINE SISKIN	18.0	134.6
EVENING GROSBEEK	-13.7	-14.3
HOUSE SPARROW	28.0	19.5

EASTERN KINGBIRD USE OF AN ATYPICAL NEST SITE IN SOUTHERN ALBERTA

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The Eastern Kingbird breeds throughout much of the United States and southern Canada.² Within the grasslands region of southern Alberta this species is common to abundant⁹ and has been found to occupy a variety of nesting habitats ranging from agricultural shelterbelts, river valleys and wooded coulees, preferring scattered trees in open country that provide a sufficient food base.¹⁰

Eastern Kingbirds typically select a nest site on a horizontal tree or shrub branch (usually deciduous) and usually well away from the trunk.^{1,4,5,6,7} The nest site may vary in vertical location from 2 to 60 feet above the ground,^{4,5} at an average height of 8 to 20 feet.² Murphy (1983) suggests that Eastern Kingbird nest site selection balances the need for nest protection from predators and from the weather.

On 3 July 1994 an Eastern Kingbird nest and brood was discovered in a solution pocket of a large sandstone boulder at Canadian Forces Base Suffield (proposed Suffield National Wildlife Area, longitude 110° 24' 50", latitude 50° 32' 00", elevation 650 m A.S.L.), 30 km north of Medicine Hat, Alberta. An adult bird was initially observed at the nest site. Observations from atop a nearby boulder revealed a nest constructed of small twigs, fine native grasses, and other herbaceous material containing three visible nestlings. The

nestlings were blind and downy white with orange-yellow mouths. More nestlings may have been concealed as the back of the nest was obscured from view.

The dimensions of the solution pocket, within which the nest cup was placed, were approximately 16 cm tall by 13 cm wide by 15 cm deep. The nest was approximately 2.5 m above the ground toward the upper right corner of the boulder's WSW facing side. The boulder itself had approximate dimensions of 3.0 m tall by 2.5 m wide by 3.5 m thick, and was supported at an angle in a hoodoo-like fashion by a gentle bentonite clay slope. The surrounding coulee habitat could be described as badlands topography, including the presence of sparse, low shrubs, bentonite clay slopes, tall sandstone cliffs, slumped material, and a small permanent stream draining into the South Saskatchewan River. Habitat found 300 to 400 metres further up the coulee could be considered more typical Eastern Kingbird nesting habitat with the presence of larger deciduous shrubs and trees including alder (*Alnus spp.*), birch (*Betula spp.*), and cherry (*Prunus spp.*), plus open slopes for foraging.

Both adult kingbirds remained mainly within 20 m of the nest and engaged in defensive behaviour that included silent observation, vocalization, and hovering above nearby shrubs and the nesting boulder. At



Eastern Kingbird nest in sandstone boulder

Andy Bezener

least one of the adults approached the nest with food and perched nearby but did not feed the young. Because of the apparent reluctance of the parents to feed the young in our presence, observations were terminated after 15 minutes.

A review of the literature failed to produce documentation of Eastern Kingbird use of boulders as potential nesting sites. However, the literature has documented other unusual Eastern Kingbird nesting sites including the inside of a gourd suspended from a pole, inside a rain gauge, in a reflector of an electric street light, inside confiscated Northern Oriole nests,¹ inside fire-burned trees and snags,³ on stumps, fence posts, or upended tree roots.^{1,8,10}

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BLACK-THROATED SPARROW AT OLDS, ALBERTA

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Spring 1994 brought calm, warm weather to central Alberta; ideal conditions for migrating birds. We had enlarged our bird feeder the previous fall to accommodate the large numbers of winter birds expected. Tree Sparrows appeared on 10 April, Song and Vesper Sparrows on 25 April, White-crowned Sparrows on 10 May, Clay-coloured Sparrows on 15 May, Chipping Sparrows on 19 May and White-throated Sparrows on 5 June.

At 1900 hours on 28 May 1994 we observed an unusual bird feeding with the goldfinches on the feeder outside our kitchen window. Its bold black-and-white facial pattern and distinctive black bib left no doubt as to its identity — a Black-throated Sparrow far from its southwestern United States haunts.

The feeder contained a mixture of red millet, niger thistle and black sunflower seeds. The sunflower seeds and the millet appeared to be

preferred by the Black-throated Sparrow. It fed two to three minutes at a time and returned to the tray four times that evening. It reappeared the following morning at 0530 hours. The bird fed periodically all day, allowing extensive observation and the acquisition of photographic documentation. The Black-throated Sparrow was not aggressive and seemed to go about the feeding tray unnoticed by the other birds.

The Black-throated Sparrow appeared again at the feeder at 0600 hours on 31 May. However it, along with American Goldfinches and a Chipping Sparrow, was immediately driven from the feeder by a Song Sparrow and did not return. It was seen briefly for the last time on 1 June atop a small spruce tree.

Editor's Note: This would appear to be the first documented record of the Black-throated Sparrow in Alberta.



Black-throated Sparrow

Thelma Lissel

WARBLER REPRODUCTIVE SUCCESS IN WESTERN CANADA

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Many migratory North American passerines apparently are declining in numbers.^{3,14} Some of these species have been shown to have poor reproductive success in eastern North America.¹ Due to concerns over the fate of these species, migratory passerines have been increasingly incorporated into management decisions.¹⁵ However, relatively few data exist on the reproductive success of many migratory passerines from Canada.¹⁷ Here I present and compare data on the reproductive success (clutch sizes, brood sizes, brood parasitism rates, and nest success) of five wood warbler species: Yellow Warbler, Yellow-rumped Warbler, American Redstart, Ovenbird, and Common Yellowthroat.

These warbler species nest on different substrates. Yellow-rumped Warblers and American Redstarts nest in the subcanopy and canopy, Yellow Warblers and Common Yellowthroats nest in shrubs, and Ovenbirds nest on the ground.^{4,9} Nesting success of passerines vary with nest placement, with ground-nesting species apparently suffering higher predation than shrub- or tree-nesting species.^{18, see 9} However, brood parasitism rates apparently do not vary with nest placement.⁹

Data were obtained from nest cards of the Prairie Nest Record Card Scheme. Nest cards in this scheme are submitted from Alberta, Manitoba, Saskatchewan, and the Northwest Territories. The cards used were collected between 1927

and 1991 (most records were between 1960 and 1990). In calculations of clutch sizes, only complete clutches incubated by a female were included. Nest success was calculated using the Mayfield method.^{10,11} Half the number of days between two subsequent visits during which a nest was depredated or deserted were added to the number of previous days the nest survived to obtain the total number of nest survival days. For nest survival calculations, data on the incubation and nestling period lengths were obtained from Ehrlich *et al.*⁴

The clutch sizes differed significantly among the warbler species (Kruskall-Wallis ANOVA, $KW = 9.57$, $df = 4$, $P = 0.05$). Yellow Warblers produced significantly more eggs than Common Yellowthroats (multiple comparisons test, $P < 0.05$; Table 1). Clutch sizes accorded with those reported for the study species by others.^{4,13} I did not find significant ($KW = 2.92$, $df = 3$, $P = 0.80$) regional variation in the clutch size of Yellow Warblers (this was the only species for which data were sufficient for statistical analysis). Brood sizes differed significantly among the species ($KW = 15.9$, $df = 4$, $P = 0.003$). Yellow Warblers raised significantly more young than Common Yellowthroats (multiple comparisons test, $P < 0.05$). I did not find any significant regional difference in the brood size of Yellow Warblers ($KW = 0.98$, $df = 3$, $P = 0.80$).

Probability of nest survival was

Table 1. REPRODUCTIVE OUTPUT OF FIVE WOOD WARBLERS IN WESTERN CANADA								
Species	Mean Clutch Size	S.D.	N	Mean Brood Size	S.D.	N	Nest Survival	% of Nests Parasitized
Yellow Warbler	4.24	0.76	227	3.97	0.88	102	46	18.6
Yellow-rumped Warbler	4.09	0.07	11	2.57	0.97	7	77	32.0
American Redstart	4.00	0.81	7	3.60	1.51	5	100	6.2
Ovenbird	4.12	0.83	8	3.50	1.51	6	100	36.8
Common Yellowthroat	3.33	1.00	9	2.33	1.52	3	31	45.5
*Probability of nest survival (%) using the Mayfield method ^{10,11}								

Table 2. BROOD PARASITISM RATES REPORTED FOR FIVE WOOD WARBLER SPECIES				
Species	% of Nests Parasitized	N	Study Area	Source
Yellow Warbler	29.6	1350	Ontario	13
Yellow-rumped Warbler	31.1	122	Ontario	13
American Redstart	0.0	278	New Hampshire	16
	20.0	285	Ontario	13
Ovenbird	18.7	33	Michigan	6
	11.9	260	Ontario	13
Common Yellowthroat	19.7	84	Minnesota	7, 8
	19.0	168	Ontario	13

highest for the Ovenbirds and American Redstarts. Probability of nest survival was lowest for the Common Yellowthroats and Yellow Warblers (Table 1). Martin recorded in forested habitats that shrub-nesting species, in general, experience higher nest predation than the ground-nesting and canopy-nesting species.⁹ The values for nest survival were calculated for incubation and nestling periods combined. However, nest survival can differ over the breeding season.¹¹ Indeed, I found that nest survival for the Yellow Warblers was lower (0.51, n = 155) during incubation than the nestling period (0.67, n = 76). It is unclear why nest survival was higher in the nestling period in this species. Factors such as differences in weather conditions or changes in parental behaviour¹² may have caused this trend.

Out of a total of 432 nests of the five species, 88 (20.3%) were parasitized by Brown-headed Cowbirds. Brood parasitism rates ranged from

6.2% to 45.5% (Table 1), but did not differ significantly across the species ($\chi^2 = 7.2$, df = 4, $P > 0.05$). Martin also found that brood parasitism is not correlated with nest placement.⁹ Brood parasitism rates differed between this study and many previous studies (Table 2). Possible reasons may be regional differences in the use of habitat by the study species or differences in cowbird density. However, brood parasitism rates for the Yellow Warblers did not differ within Canada ($\chi^2 = 4.1$, df = 2, $P > 0.05$). The Northwest Territories were excluded from this test because Brown-headed Cowbirds do not occur in this region.⁵

It is interesting to note that Common Yellowthroats had the lowest reproductive output and nest survival, and highest brood parasitism rates. Based on the analysis of the Breeding Bird Survey data, this species is showing a significant long-term (1966-1990) population decline.² These observations suggest that detailed data on the ecology of

this species are urgently required. Such data should be collected from different parts of its range.

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THE GIANT HOUSE SPIDER IN SASKATCHEWAN

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In May of 1994 Moe Koetting brought a large Agelenid spider to the University of Saskatchewan Department of Biology for identification. She had found it walking across the ceiling of her house on an acreage near Bradwell, about 30 km south-east of Saskatoon. It proved to be a mature female of the Giant House Spider (*Tegenaria gigantea* Chamberlin & Ivie). This is the first time this species has been found in Saskatchewan.

The Giant House Spider is the large hairy spider which has horrified generations of Englishmen by dashing wildly across the carpet, lurking in a tangle of cobwebs behind the water closet, or scrambling desperately to escape from the bathtub into which it has fallen. Flanders and Swan immortalized the beast in their song 'The Spider'. It was thus with considerable enthusiasm that we hurried off to investigate Ms. Koetting's house and determine if this arachnological classic had become established here in Saskatchewan.

Ms. Koetting mentioned having seen several spiders, similar to the one she caught, moving across the walls of her house during the year she had occupied it but she had found no webs. Armed with flashlights we ventured into the two-foot-high crawl space beneath the house. Water pipes in the crawl space were not insulated so, presumably, winter temperatures remain above freezing

there. Giant House Spider webs were common between stringers. They were most abundant near plumbing pipes where a small leak kept the humidity high and near a vent where small insects could enter. Many of the webs appeared to be unoccupied. We saw three half-grown juveniles and captured one of these. Egg sacs were present in four webs in loose clusters of up to ten. The new appearance of most of the webbing and the limited number of webs with egg sacs suggest that the colony is probably not more than one or two years old.

The Giant House Spider is native to Europe. It first became established in North America in the Victoria/Vancouver area of coastal British Columbia where it has been known since the 1920s.² It appeared in the Seattle area of Washington state in the 1960s³ and has gradually spread across British Columbia. Specimens from British Columbia were collected from Lillooet in 1950, Campbell River in 1969, Kelowna and Williams Lake in 1988, and Summerland in 1993. In recent years it has begun to appear in Alberta. Leech and Steiner⁷ reported Giant House Spiders from houses in Edmonton, Saint Albert and Spruce Grove between 1987 and 1992. It has also been taken from houses in Calgary in 1987 and 1989 and Cardston in 1994.

The Giant House Spider is an

impressive spider. Females are 12-18 mm in length with a leg span of up to 60 mm. Males are smaller (10-14 mm long) and more slender than females, but have longer legs. Spiders likely to be confused with *T. gigantea* are our native funnel-web spiders of the genus *Agelenopsis* which are rarely found indoors and *gigantea*'s small relative, the Common House Spider (*Tegeneria domestica* Clerck). *T. domestica* is also a European introduction. It is found in buildings throughout the province. Adults are 6-11 mm in length. The Hobo Spider (*Tegenaria agrestis* Walckenaer) is another introduction from Europe. It has become established in British Columbia, Washington, Oregon and Idaho^{4,13} and should be looked for in Alberta and Saskatchewan. The Hobo Spider is about the same size as the Common House Spider and very similar in appearance. It can only be distinguished by small details of its anatomy. It is a medically significant species whose bite can produce local necrosis which is very slow to heal.^{4,12}

A number of useful references are available to anyone interested in the identification of the house-dwelling *Tegenerias*.^{4,9,10,11} While the Giant House Spider is one of the best known if least loved spiders of Britain and northern Europe, its nomenclatural history has been fraught with confusion and some background information is necessary for anyone dealing with the literature. During the first half of this century the Giant House Spider was considered to be a single species and went variously under the names *atrica* (C.L. Koch 1843), *saeva* (Blackwall 1844), or *larva* (Simon 1875). Workers^{5,6} in the 1950s demonstrated that the Giant House Spider was really two very similar species, *atrica* and *saeva*, and that *larva* was a junior synonym of *atrica*. In 1975 Locket⁸ showed

that this group included a third species which he named *propinqua*. Crawford and Locket³ found that this species had previously been named *gigantea* by Chamberlin and Ivie in 1935.² Chamberlin and Ivie had based their name on specimens from the introduced population on Vancouver Island, British Columbia. So far, *gigantea* is the only one of the three species to have been found in North America. Brignoli¹ argued that *gigantea* is a synonym of *duellica* (Simon 1875) and he has been followed by a number of recent authors. However, as the type specimens of *duellica* cannot be located, and Simon's description and illustrations are insufficient to conclusively place the species, it seems best to treat *duellica* as a *nomin dubium* and continue to use *gigantea*.

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Giant House Spider (Tegeneria gigantea)

Don Buckle

"Many years ago, the Greeks equated butterflies with the souls of people, using the Greek word for 'psyche' for both. One does not have to believe in Greek mythology to know that in a world without butterflies, the souls of all people would be greatly diminished." *Jeffrey Glassberg, Butterflying through binoculars.*

SASKATCHEWAN CHRISTMAS MAMMAL COUNT — 1994

Compiled by Wayne C. Harris, Box 414, Raymore, SK. S0A 3J0

The number of mammal counts conducted this year reached an all time high of 84, exceeding the 82 submitted in 1991. Furthermore, 95% of all bird counts being done now do mammal counts in conjunction with them. The number of species recorded was 42, up slightly from last year, but below the record 44 set in 1991.

A new species was added to the all-time list when Burke Korol and Robert Wapple found Mountain Lion tracks along the banks of the Saskatchewan River on the Gardiner Dam count. The tracks were believed to be those of an adult female accompanied by two almost fully grown young. Interestingly, a single adult was seen crossing a nearby road just over a month later, suggesting that the family unit had broken up by that time or that there was another animal in the vicinity. Although not new, two other cat species were also recorded. A set of Lynx tracks were found in the Cypress Hills on the Fort Walsh count, the first report of this species in a number of years. Bobcat tracks on the Grasslands National Park count combined with the Feral Cat found on the Gardiner Dam count means that all of the provinces free-roaming cats were seen.

The very mild weather left very poor conditions for finding mammal tracks throughout much of the southern portion of the province and in the southwest corner the complete absence of snow for the entire count period made things even worse there. As a result, for the very first time, two areas conducted mammal counts and reported no animals.

As usual, White-tailed Deer were the most frequently encountered mammal, followed closely (no pun!) by Coyotes. Rabbits were the next most frequent species as usual.

Generally, populations appear to be relatively stable. Both White-tailed and Mule Deer were similar to last year which is above the long-term average. White-tailed Jack Rabbit and Snowshoe Hare numbers were similar to last year but below the long-term average. Coyote numbers were noticeably up while Foxes were less common. Pronghorn numbers were much improved over last year, undoubtedly a reflection of the lack of snow throughout their range. In spite of the warm weather ground squirrels were hard to find and only one Black-tailed Prairie Dog was above ground in spite of the balmy weather. Muskrat populations were much improved after a couple of somewhat moister years which have

replenished their breeding habitat. Of note were twelve Elk on the Saskatoon count.

For weather, coverage and participants please refer to the Christmas Bird Count found elsewhere in this issue. Numbers appearing before the count location name in the tables refer to the location of the count on the map included with the bird count. In the tables, a numeral alone indicates that the mammals were actually seen, while a letter preceding the number means that the number was

inferred by the means defined below. A letter alone means that the species was present but it was either impossible to estimate the numbers or that no attempt was made to do so.

T = tracks

L = active lodge or hut

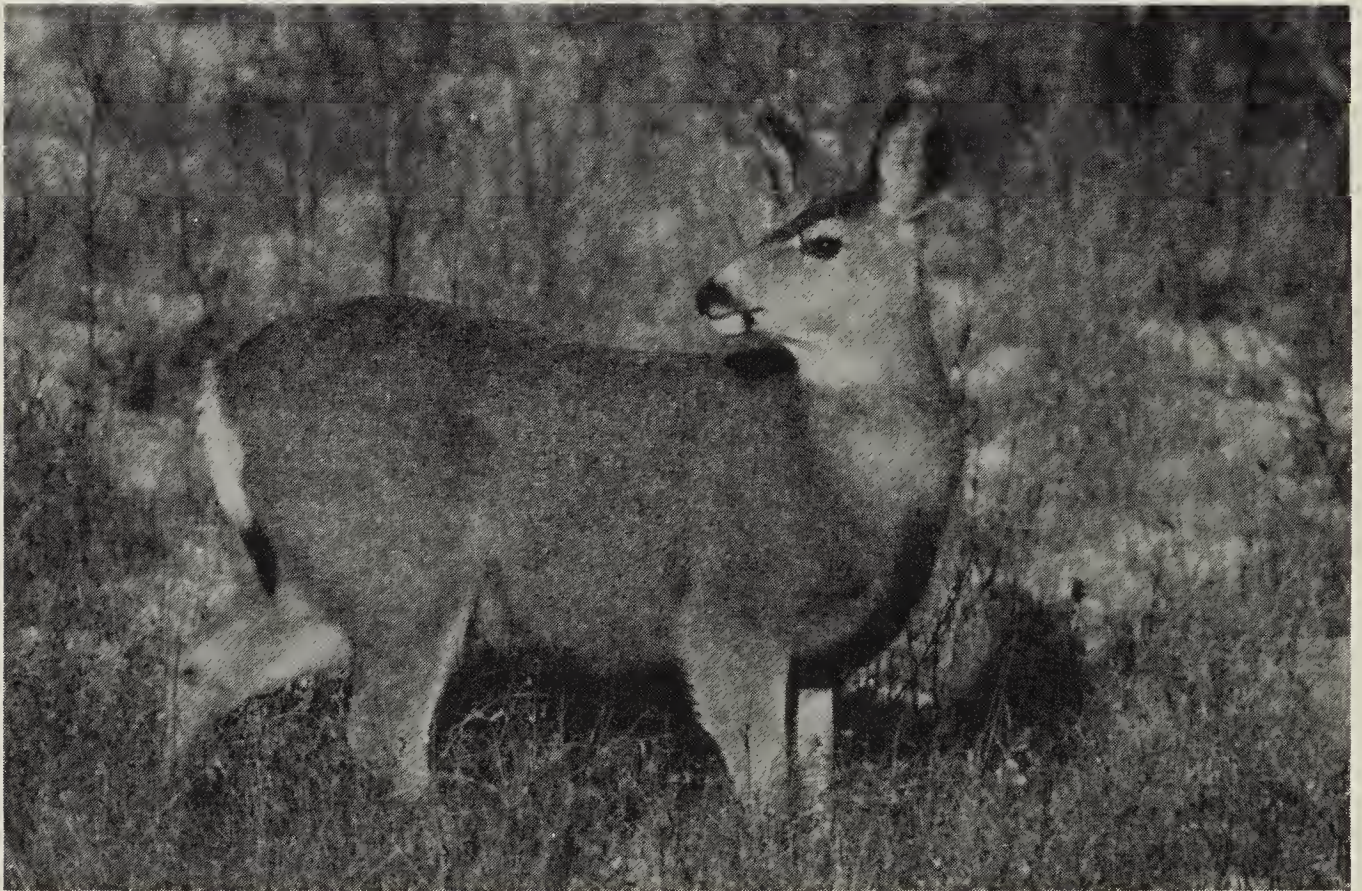
D = dead animal found

d = fresh diggings found

S = smell or odour

H = heard

+ = present during the count period (17 December to 2 January) but not found on count day.



Mule Deer, Alberta

Wayne Lynch

Table 1-1. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE												SPECIES
1. ABERNETHY-KATEPWA LAKE 19 December 1994	2. ARMIT 31 December 1994	3. ASSINIBOIA 2 January 1995	4. BANGOR 26 December 1994	5. BETHUNE 2 January 1995	6. BIGGAR 29 December 1994	7. BIRCH HILLS 17 December 1994	8. CANDLE LAKE 20 December 1994	9. CHRISTOPHER LAKE 2 January 1995	10. CLARK'S CROSSING 17 December 1994	11. CORONACH 22 December 1994	12. CRAVEN 17 December 1994	
2			2 4		T(3)	T(54)	T(20)	T(3)	T(2)		T(6)	MASKED SHREW SHREW species NUTTALL'S COTTONTAIL COTTONTAIL species SNOWSHOE HARE
	T(1)	10		1	T(5)	T(5)			T(23)		T(5)	WHITE-TAILED JACK RABBIT RICHARDSON'S GROUND SQUIRREL BLACK-TAILED PRAIRIE DOG 6 GREY SQUIRREL FOX SQUIRREL
	3 L(1) T(2)		1			1	17	8 L(1)			H(7) T(12)	AMERICAN RED SQUIRREL NORTHERN FLYING SQUIRREL NORTHERN POCKET GOPHER AMERICAN BEAVER DEER MOUSE
	T(2)							L(8) T(3)		1	T(1)	GAPPER'S RED-BACKED VOLE MUSKRAT MEADOW VOLE VOLE species MOUSE species
2	T(1) T(4)	12	7		T(3)	T(2) T(7)	T(1)		1	2 4	3	NORWAY RAT HOUSE MOUSE AMERICAN PORCUPINE COYOTE WOLF
	T(1) T(1)	12 9	1		T(2)	T(4)	T(1)	+	T(3)		T(2)	RED FOX RACCOON AMERICAN MARTEN FISHER ERMINE
	T(1)	2 3 10			T(1)	T(5) T(1) T(1)			T(5)		T(1)	LONG-TAILED WEASEL LEAST WEASEL WEASEL species AMERICAN MINK AMERICAN BADGER
		3					T(1)					STRIPED SKUNK RIVER OTTER MOUNTAIN LION LYNX BOBCAT FERAL CAT
4	4 T(1) T(2)	14 47 23	6		2 32	2	2	T(2)	T(1) T(32)	6 2	1 8 T(9)	MULE DEER WHITE-TAILED DEER DEER species MOOSE AMERICAN ELK PRONGHORN
3	13	11	6	1	7	11	7	7	10	7	11	TOTAL SPECIES

Table 1-2. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE												
SPECIES	13. CROOKED LAKE 31 December 1994	14. CROOKED RIVER 24 December 1994	15. DUVAL 27 December 1994	16. EASTEND 2 January 1995	17. ENDEAVOUR 25 December 1994	18. FENTON 1 January 1995	19. FIFE LAKE 23 December 1994	20. FORT QU'APPELLE 17 December 1994	21. FORT WALSH 17 December 1994	22. GARDINER DAM 19 December 1994	23. GOOD SPIRIT LAKE 20 December 1994	24. GOVENLOCK 18 December 1994
MASKED SHREW									T(1)			
SHREW species									5	3		4
NUTTALL'S COTTONTAIL												
COTTONTAIL species												
SNOWSHOE HARE	T(2)		T(11)		T			2	T(4)	T(4)	T(20)	
WHITE-TAILED JACK RABBIT			T(2)	2	+			+	2	T(5)	T(4)	1
RICHARDSON'S GROUND SQUIRREL												1
BLACK-TAILED PRAIRIE DOG												
GREY SQUIRREL												
FOX SQUIRREL												
AMERICAN RED SQUIRREL	3				2	1		15	20		2	
NORTHERN FLYING SQUIRREL											2	
NORTHERN POCKET GOPHER								+				
AMERICAN BEAVER							1	1			+	
DEER MOUSE			1					2			1	1
GAPPER'S RED-BACKED VOLE											2	
MUSKRAT	L		L(4)					7			L(16)	1
MEADOW VOLE					5				2			
VOLE species												
MOUSE species	T		T(5)						T(7)	T(11)		
NORWAY RAT												
HOUSE MOUSE				2								
AMERICAN PORCUPINE			T(3)			D(1)	1	1	1	2	2	1
COYOTE		1	H(7)	1	T	1		1	8	7	1	1
WOLF												
RED FOX			T(2)						T(1)	T(1)	T(6)	
RACCOON				1								
AMERICAN MARTEN												
FISHER												
ERMINE					T(2)							
LONG-TAILED WEASEL											T(3)	
LEAST WEASEL						+						
WEASEL species									T(2)			
AMERICAN MINK								3				
AMERICAN BADGER											T(2)	
STRIPED SKUNK	S		T(1)	1								
RIVER OTTER												
MOUNTAIN LION												
LYNX									T(1)	T(3)		
BOBCAT												
FERAL CAT										1		
MULE DEER				4			13	3	44	81		22
WHITE-TAILED DEER	4	T(4)	7	16	1	T(6)	11	+	38	82	T(35)	7
DEER species			T(10)									
MOOSE					T						T(2)	
AMERICAN ELK					T				T(30)			
PRONGHORN				6					+			24
TOTAL SPECIES	6	2	9	8	8	5	4	12	16	11	15	10

Table 1-3. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE												
25. GRASSLANDS N. P. 20 December 1994	26. GRASSLANDS N.P. (NW) 23 December 1994	27. GRAYSON 25 December 1994	28. HUDSON BAY 20 December 1994	29. HUMBOLDT 26 December 1994	30. HUMBOLDT W. 26 December 1994	31. INDIAN HEAD 22 December 1994	32. KAMSACK 26 December 1994	33. KELVINGTON 31 December 1994	34. KENASTON 19 December 1994	35. KILWINNING 19 December 1994	36. KINDERSLEY 26 December 1994	
												SPECIES
2	1			2	1	T(1) 2	38	T(36)	3		1	MASKED SHREW SHREW species NUTTALL'S COTTONTAIL COTTONTAIL species SNOWSHOE HARE
1	T(1)			T		4		T(6)	T(10)			WHITE-TAILED JACK RABBIT RICHARDSON'S GROUND SQUIRREL BLACK-TAILED PRAIRIE DOG GREY SQUIRREL FOX SQUIRREL
			2			11				2		AMERICAN RED SQUIRREL NORTHERN FLYING SQUIRREL NORTHERN POCKET GOPHER AMERICAN BEAVER DEER MOUSE
		2	L(8)				L					
1							L		L T			GAPPER'S RED-BACKED VOLE MUSKRAT MEADOW VOLE VOLE species MOUSE species
						T(1)		T(3)				
1 21	12	1	+	T(1) T		8	H	T(1) T(3)	1 1		2	NORWAY RAT HOUSE MOUSE AMERICAN PORCUPINE COYOTE WOLF
			+	T		1 3	1	T(2)	1		+	RED FOX RACCOON AMERICAN MARTEN FISHER ERMINE
				T(1)		1		T(5)	T(1)			LONG-TAILED WEASEL LEAST WEASEL WEASEL species AMERICAN MINK AMERICAN BADGER
				+					d(1)			
T(1)							1		T(1)			STRIPED SKUNK RIVER OTTER MOUNTAIN LION LYNX BOBCAT FERAL CAT
68 37	56 10		+			29	67 6 60	T(3) T(17)	1		+	MULE DEER WHITE-TAILED DEER DEER species MOOSE AMERICAN ELK PRONGHORN
156	136								T(6)			
9	6	2	5	7	1	10	9	9	12	1	4	TOTAL SPECIES

Table 1-4. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE												
SPECIES	37. KINLOCH 23 December 1994	38. KUTAWAGAN LAKE 27 December 1994	39. LARONNE 26 December 1994	40. LAST MOUNTAIN L. N.W.A 26 December 1994	41. LEADER (North) 26 December 1994	42. LEADER (South) 31 December 1994	43. LUSELAND 26 December 1994	44. MACDCWALL 2 January 1995	45. MATADOR 27 December 1994	46. MCMAHON LAKES 20 December 1994	47. MEADOW LAKE 26 December 1994	48. MELFORT (A) 26 December 1994
MASKED SHREW				1								
SHREW species					1				1			
NUTTALL'S COTTONTAIL												
COTTONTAIL species												
SNOWSHOE HARE	T(20)	2	T(6)					T(3)		T(15)		
WHITE-TAILED JACK RABBIT				T(7)	3		+	T(1)				
RICHARDSON'S GROUND SQUIRREL												
BLACK-TAILED PRAIRIE DOG												
GREY SQUIRREL												
FOX SQUIRREL												
AMERICAN RED SQUIRREL	T(5)		5							2	4	
NORTHERN FLYING SQUIRREL												
NORTHERN POCKET GOPHER												
AMERICAN BEAVER	L(3)			L(1)								1
DEER MOUSE							+					
GAPPER'S RED-BACKED VOLE											1	
MUSKRAT	L(10)			L(76)								
MEADOW VOLE	1			D(3)								
VOLE species			T(6)									
MOUSE species					1			T(3)				7
NORWAY RAT												
HOUSE MOUSE												
AMERICAN PORCUPINE	1	2		T(2)	1							
COYOTE	H(1)	4		3	2		2	T(3)	2			1
WOLF										T(1)		
RED FOX		1	T(3)	T(1)				T(6)		T(11)		
RACCOON												
AMERICAN MARTEN										T(2)		
FISHER										T(1)		
ERMINE			T(4)	T(2)								
LONG-TAILED WEASEL												
LEAST WEASEL								T(3)				
WEASEL species	T(5)				1							
AMERICAN MINK	T(1)		T(6)	T(1)								
AMERICAN BADGER		d(1)		d(2)	T(1)							
STRIPED SKUNK				S(1)								
RIVER OTTER										T(1)		
MOUNTAIN LION												
LYNX												
BOBCAT												
FERAL CAT												
MULE DEER		7			5	2	2		41			
WHITE-TAILED DEER	T(20)	4		38	7			T(3)	4			
DEER species												
MOOSE										1		
AMERICAN ELK	T(30)											
PRONGHORN				31								
TOTAL SPECIES	11	7	6	14	9	1	4	7	4	8	2	3

Table 1-5. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE												
49. MELFORT (B) 30 December 1994	50. MELVILLE 26 December 1994	51. MOOSE JAW 26 December 1994	52. MOOSE MOUNTAIN 22 December 1994	53. NAICAM 29 December 1994	54. NICOLLE FLATS 2 January 1995	55. PADDICKWOOD 26 December 1994	56. PIKE LAKE 2 January 1995	57. PRINCE ALBERT (A) 2 January 1995	58. PRINCE ALBERT (B) 18 December 1994	59. PRINCE ALBERT N.P. 18 December 1994	60. QU'APPÉLLE VALLEY DAM 18 December 1994	SPECIES
2				T(1)	1		T(13)			T(3)	T(20)	MASKED SHREW SHREW species NUTTALL'S COTTONTAIL COTTONTAIL species SNOWSHOE HARE
		2					T(1)		T			WHITE-TAILED JACK RABBIT RICHARDSON'S GROUND SQUIRREL BLACK-TAILED PRAIRIE DOG GREY SQUIRREL FOX SQUIRREL
		5					1					
			9	H(2)					2	16		AMERICAN RED SQUIRREL NORTHERN FLYING SQUIRREL NORTHERN POCKET GOPHER AMERICAN BEAVER DEER MOUSE
T(3)	L(1)											
	L(7)											GAPPER'S RED-BACKED VOLE MUSKRAT MEADOW VOLE VOLE species MOUSE species
	T(1)						T(2)			T(5) T(5)		
												NORWAY RAT HOUSE MOUSE AMERICAN PORCUPINE COYOTE WOLF
+			1		3		4	1 +		T(1) T(1) 4	8	
								+	T	2	+	RED FOX RACCOON AMERICAN MARTEN FISHER ERMINE
										T(1) 1		
1						T(2)	T(1) T(1)			T(1) T(1)	+	LONG-TAILED WEASEL LEAST WEASEL WEASEL species AMERICAN MINK AMERICAN BADGER
				S(1)			1			+	1	STRIPED SKUNK RIVER OTTER MOUNTAIN LION LYNX BOBCAT FERAL CAT
						T(1)				6		
1	T(7)	12		3	15 15	15	5	+	T	T(13)	23 7	MULE DEER WHITE-TAILED DEER DEER species MOOSE AMERICAN ELK PRONGHORN
										1 25		
5	4	3	2	4	4	3	9	4	4	17	7	TOTAL SPECIES

Table 1-6. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE												
SPECIES	61. RAYMORE 25 December 1994	62. REGINA 26 December 1994	63. ROUND LAKE 27 December 1994	64. SALTCOATS 24 December 1994	65. SASK. LANDING P.P. 28 December 1994	66. SASKATOON 26 December 1994	67. SCOTT 30 December 1994	68. SHAMROCK 27 December 1994	69. SKULL CREEK 26 December 1994	70. SNOWDEN 30 December 1994	71. SPALDING 26 December 1994	72. SPINNEY HILL 27 December 1994
MASKED SHREW	2											1
SHREW species					1				26		T	
NUTTALL'S COTTONTAIL												
COTTONTAIL species												
SNOWSHOE HARE	T(7)	T(4)	T	T(9)		9			1		T	
WHITE-TAILED JACK RABBIT	1	6	T			8	T(2)	1	2			
RICHARDSON'S GROUND SQUIRREL									2			
BLACK-TAILED PRAIRIE DOG												
GREY SQUIRREL											T(1)	
FOX SQUIRREL		+										
AMERICAN RED SQUIRREL	1	4	5						2	3		2
NORTHERN FLYING SQUIRREL										+		
NORTHERN POCKET GOPHER												
AMERICAN BEAVER		L(1)	2		L(1)	1						
DEER MOUSE	4	T(15)	T			T(2)						
GAPPER'S RED-BACKED VOLE	1					1						
MUSKRAT	L(4)		9	T(3)		1						
MEADOW VOLE	1	T(1)							3	T(2)		
VOLE species	T(8)	T				T(1)					T	
MOUSE species	T(10)	T	T			1	T(1)			T(5)	T	
NORWAY RAT	T(2)											
HOUSE MOUSE	T(1)											
AMERICAN PORCUPINE	3	T(1)		T(5)	1	1			7		T(1)	
COYOTE	10	2		T(2)	1	7	T(1)		10		T	1
WOLF												
RED FOX	1	6		T(2)		3	1					
RACCOON									3			
AMERICAN MARTEN												
FISHER												
ERMINE	T(2)											
LONG-TAILED WEASEL			T						2			
LEAST WEASEL												1
WEASEL species	T(4)	1		T(5)		T(1)				+	T(1)	
AMERICAN MINK			1	T(1)	T(1)	1			+			
AMERICAN BADGER	d(1)								2			
STRIPED SKUNK		S(1)							2			
RIVER OTTER												
MOUNTAIN LION												
LYNX												
BOBCAT												
FERAL CAT												
MULE DEER			+		28	T(1)	T(3)		10			
WHITE-TAILED DEER	7	33	7	T(75)	37	50	T(4)	2	23	2	T	
DEER species	T(13)	T				T(1)						
MOOSE											T(1)	
AMERICAN ELK						12				15		
PRONGHORN					15							
TOTAL SPECIES	16	13	10	8	8	14	6	2	15	6	11	4

Table 1-7. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCATION AND DATE										
73. SQUAW RAPIDS 23 December 1994	74. SWIFT CURRENT 18 December 1994	75. TISDALE 26 December 1994	76. TURTLE LAKE (A) 1 January 1995	77. TURTLE LAKE (B) 30 December 1994	78. WAKAW LAKE 22 December 1994	79. WEYBURN 17 December 1994	80. WHITE BEAR 27 December 1994	81. WHITE WOOD 18 December 1994	82. YORKTON 28 December 1994	
										TOTAL COUNT
										SPECIES
T	2					T(1)	T(2)	T(1)		4 MASKED SHREW 7 SHREW species 13 NUTTALL'S COTTONTAIL 1 COTTONTAIL species 41 SNOWSHOE HARE
T(2)				T				3	T	
T(2)	1	1				T(44)	T(2)	T(1)	T	40 WHITE-TAILED JACK RABBIT 2 RICHARDSON'S GROUND SQUIRREL 1 BLACK-TAILED PRAIRIE DOG 5 GREY SQUIRREL 3 FOX SQUIRREL
	1					1				
17			1	2	2			2		33 AMERICAN RED SQUIRREL 2 NORTHERN FLYING SQUIRREL 1 NORTHERN POCKET GOPHER 17 AMERICAN BEAVER 19 DEER MOUSE
L(4) T(2)						T(21)	T	T(3)		
L(1)				T		T(8)		1		4 GAPPER'S RED-BACKED VOLE 18 MUSKRAT 13 MEADOW VOLE 8 VOLE species 25 MOUSE species
T				T				T(4)		
T(2) T(1) T(1)	1 T(1)		2 4			T(2) 1	T(3) 5	+ D(1) 1		2 NORWAY RAT 4 HOUSE MOUSE 32 AMERICAN PORCUPINE 59 COYOTE 4 WOLF
1			5			1		2		38 RED FOX 4 RACCOON 2 AMERICAN MARTEN 2 FISHER 5 ERMINE
T(1) T(2)		1		T(1)						11 LONG-TAILED WEASEL 7 LEAST WEASEL 16 WEASEL species 17 AMERICAN MINK 10 AMERICAN BADGER
	1					+	T(1)			
T(1)			4							14 STRIPED SKUNK 5 RIVER OTTER 1 MOUNTAIN LION 1 LYNX 1 BOBCAT 1 FERAL CAT
3 T(10) T(4) T(30)	2 11		5 50 2	2		+ 8	128	37	T	30 MULE DEER 66 WHITE-TAILED DEER 6 DEER species 10 MOOSE 9 AMERICAN ELK 9 PRONGHORN
17	8	2	8	6	1	11	7	11	3	TOTAL SPECIES

SILVER-HAIRED BAT MIGRATION AT MATLOCK, MANITOBA

DOUG COLLISTER, 3426 Lane Cr. S.W., Calgary, AB. T3E 5X2

The Silver-haired Bat is found throughout Canada in summer, and is one of the most common bats in the prairie aspen parkland.⁵ The species tends to be solitary but may occur in small groups. At Delta Marsh in Manitoba single roosting bats were most common although groups of up to six were found.³ It inhabits woodlands or stands of trees in open country, preferably near ponds or streams, and roosts in trees, behind loose bark or in cavities.^{4 in 5} In Manitoba, the Silver-haired Bat is active throughout the night from just after sunset to just before sunrise.² The species is migratory and moves south between mid-August and mid-September.² During migration it has been observed in flocks and has been associated with migrating birds.¹ When migrating, Silver-haired

Bats may be found in diverse habitats and use a variety of roosts.

Silver-haired Bats were caught incidentally during a banding study of fall bird migration 8 km south of Winnipeg Beach at Matlock, Manitoba. Habitat at the study site includes scattered green ash (*Fraxinus pennsylvanica*) trees and a few white spruce (*Picea glauca*), with patches of red-osier dogwood (*Cornus stolonifera*) and cranberry (*Viburnum opulus*). Bats were captured in five 30 mm mist-nets placed in the same locations each year during the latter part of August. Table 1 summarizes the bats captured each year within the framework of days when capture was possible and not possible. No bat species other than silver-haired were detected. As my study was



Silver-haired Bat roosting on green ash

Doug Collister

Table 1. SILVER-HAIRED BATS CAPTURED AT MATLOCK 1988-1992

Date	1988	1989	1990	1991	1992	Total
11 August						
12 August						
13 August						
14 August					1	1
15 August	3				3	6
16 August						
17 August	2					2
18 August						
19 August						
20 August	2					2
21 August	1		1			2
22 August						
23 August			1			1
24 August			1			1
25 August						
26 August						
27 August						
28 August		1				1
29 August		3	2			5
30 August						
31 August						
01 Sept.						
02 Sept.						
Total	8	4	5		4	21

Note: Un-shaded cells represent days when nets were open and bats could have been captured, while shaded cells represent days when nets were furled and capture of bats was not possible.

focussed on bird migration, all bats netted were simply disentangled and set free. At least some individuals were males.

No bats were caught in the hours immediately after sunset. This suggests that most, if not all, were selecting a roost site when they became entangled in the mist-net. The majority were caught in nets placed adjacent to white spruce, although mature green ash with heavily furrowed bark were never more than a few metres away. Several individuals, when released, flew to green ash trees within view and crawled up to a suitable furrow in the bark where they remained through the day. This is consistent with the

finding at Delta Marsh that older trees with furrowed bark are selected for roosting.³ At Delta Marsh 176 out of 177 roosting bats were found below 3 m suggesting that bats seeking roost sites would be susceptible to capture in 2 m high mist-nets.³

No correlation between bat captures and the peak of birds banded each year was found. However it seems likely that the Silver-haired Bats were captured while migrating. At Delta Silver-haired Bat fall migration peaked in early September.² Matlock lies on the southwestern shore of Lake Winnipeg and experiences a fall concentration of migrating passerines reluctant to cross the lake. Migrating Silver-haired Bats

may also be reluctant to risk crossing. Alternatively, it is possible that the captured bats represent a resident population. However, in that case a more even distribution of captures over the banding periods, or captures concentrated at the commencement of banding, might have been expected.

Acknowledgements This note was improved through a critical review by Jack Dubois.

1. BANFIELD, A.W.F. 1974. The mammals of Canada. University of Toronto Press, Toronto. 438 pp.

2. BARCLAY, R.M.R. 1984. Observations on the migration, ecology and behavior of bats at Delta Marsh, Manitoba. *Can. Field-Nat.* 98:331-36.
3. BARCLAY, R.M.R., P.A. FAURE and D.R. FARR. 1988. Roosting behavior and roost selection by migrating Silver-haired Bats (*Lasionycteris noctivagans*). *J. Mamm.* 69:821-25.
4. KUNZ, T.H. 1982. *Lasionycteris noctivagans*. *Mammal. Species* 172: 1-5.
5. VAN ZYLL DE JONG, G.G. 1985. Handbook of Canadian mammals. Vol. 2, Bats. National Museum of Canada, Ottawa. 212 pp.



ERRATA

PIKE LAKE BUTTERFLY CENSUS 1986-1992

KEN PIVNICK, 209 - 7th Street East, Saskatoon, SK. S7H 0W9

In 1994² I reported 34 and 66 Alfalfa Butterflies (now called the Orange Sulphur) censused in 1986 and 1988 respectively, but no Common Sulphurs (now called the Clouded Sulphur). The primary source¹ used for identification in those census years treated these two butterflies as two subspecies of the Alfalfa Butterfly. When I was questioned about this recently I examined a few pinned specimens I collected during those

censuses and found both species had been present. Hence, for those two years, the Alfalfa Butterflies reported are actually some combination of the two species.

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2. PIVNICK, K. 1994. Pike Lake butterfly census 1986-1992. *Blue Jay* 52:1-3.

MOVEMENT AND AGE OF MALE LITTLE BROWN BATS IN ALBERTA

HUGH C. SMITH, 84 Beaverbrook Cres., St. Albert, AB. T8N 2L2

The movement of prairie bats is poorly known. For example, in Alberta there are three known hibernacula where Little Brown Bats spend the winter months. There are also a number of summer maternity roosts in central Alberta.⁶ There are, however, no data at present that show where the summer bats at maternity roosts hibernate or where the bats that winter in the known hibernacula spend the summer.¹

In 1972 a program of bat banding was initiated by the Provincial Museum of Alberta in an attempt to shed some light on the movement of bats in Alberta. Unfortunately, the program was suspended after approximately 2000 bats were banded due to cancellation of the issuing of bat bands.

Smith⁸ reported the movement of three individual bats that were banded as a result of that program. One Big Brown Bat moved a distance of 176 km from point of banding to point of recovery. And two Little Brown Bats had travelled 150 km and 225 km from their banding locations. Two of these bats, one Little Brown Bat and the Big Brown Bat, were banded at maternity sites but their recovery was not at any hibernacula. The other Little Brown Bat was banded during the fall migration and was recaptured at a location away from a maternity colony and had not yet reached a hibernation site.

Recently, I received information on the recovery of two male Little Brown

Bats that had been banded at a hibernaculum and recovered away from the banding site. Both bats were banded on the same night, 9 September 1978, at Cadomin Cave, Alberta. This site is located in the front ranges of the Canadian Rocky Mountains. The first bat was recovered 19 July 1983 at Seba Beach, Alberta, approximately 184 km from the banding site. The other bat was recovered 8 km southwest of Sangudo, Alberta on 1 August 1992, approximately 180 km from where it was banded. The two recovery sites are approximately 32 km from each other and are in an east-northeastern direction from Cadomin Cave. Schowalter⁶ indicated that some male Little Brown Bats return to the same summer roost in subsequent years. If this applies to the bats that were recovered at Sangudo and Seba Beach it is a strong indication that some of the male bats at Cadomin Cave are moving to the plains of central Alberta during the summer.

Another aspect of studying the population of a group of animals has to do with the age of individuals that make up that population. Schowalter⁷ reported on a method of aging individual bats by counting the dental annuli. Phillips *et al.*⁴ pointed out several shortcomings this method poses and essentially discounted it as a means for aging bats. Banding of known age individuals is another method for aging. When banded, the bats reported in this note were listed as adults. This was determined by the epiphyseal closure of the finger joints and by weight.^{3,5} The Seba

Beach bat weighed 10.0 g and the Sangudo bat weighed 11.7 g at the time of banding.

Because both individuals were considered adults at the time of banding they would have had to have spent at least one winter in hibernation and at least one summer in foraging prior to banding. Therefore, it is safe to assume that the Seba Beach bat was more than five years of age and the Sangudo bat was more than 14 years of age when recovered. These ages are certainly not remarkable for the Little Brown Bat when compared to the ages reported by Keen and Hitchcock.² These authors reported ages of 29 and 30 years for this species. These Alberta records are still important in that they show a trend to longevity in northern plains bats.

Even though these records indicate that some male bats that hibernate in the mountains move to the plains during the summer, there is as yet no indication where the summer, maternity roosting females hibernate. Also, the longevity records reported by Keen and Hitchcock² are for male bats, as are the ages for the bats reported here. There are no records for the ages of Alberta female bats.

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2. KEEN, R. and H.B. HITCHCOCK. 1980. Survival and longevity of the Little Brown Bat (*Myotis lucifugus*) in southern Ontario. *J. Mamm.* 61:1-7.
3. KUNZ, T.H. and E.L.P. ANTHONY. 1982. Age estimation and post-natal growth in the bat *Myotis lucifugus*. *J. Mamm.* 63:23-32.
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5. SCHOWALTER, D.B. 1980. SWARMING, reproduction, and early hibernation of *Myotis lucifugus* and *M. volans* in Alberta, Canada. *J. Mamm.* 61: 350-54.
6. SCHOWALTER, D.B., J.R. GUNSON, and L.D. HARDER. 1979. Life characteristics of Little Brown Bats (*Myotis lucifugus*) in Alberta. *Can. Field-Nat.* 93:243-51.
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8. SMITH, H.C. 1979. Movement of banded bats in Alberta. *Blue Jay* 37:117-18.



A sacred place is one where the Earth's voice
can be heard more clearly. Go to these places and listen.
Once you've heard her, she can reach you anywhere.

F. Lahrman. 1988. The sacred landscape. Celestial Arts, Berkeley, CA

POETRY

SPRING'S COMING

The snow is barely gone, gray drifts
of it,
Compressed to ice, still lying cold
upon
The frozen ground beneath (where
shade
Persists) — and then a gentle rain
comes down,
The first of the spring season's
showers: soft
Its fall upon the sodden earth, upon
The matted grasses, bleached but
redolent
Of springtime odors, mix of damp
decay
And fresh green growth. Already
hillsides show
A delicate, pale greenish cast,
washed as
They are of winter's refuse. Myriad
Young blades of grass are there;
pervading all
An elemental tenderness; the year,
With one small flower open, now
comes round
Again. A distant robin sits upon
A dripping twig and carols of the rain,
The slowly greening hills, and of the
long
Spring evening coming on (and also
of
The line of amber in the clearing
west).
A chilly dusk descends at last, with
yet
Some sleety rain, and somewhere
over woods
Too dark to see, some honking
geese fly low,
Driving, their wings a-rush, into the
sure
Retreat of winter when it must be
spring.

- By Victor C. Friesen, P.O. Box 65,
Rosthern, SK. S0K 3R0

A CHICKADEE PLEA

The chickadees that visit us
Are only black and white.
The downy with his blood red cap
Arouses our delight.

The waxwing eats our berries
And displays his pretty coat.
The yellow evening grosbeak is
A bird on which we dote.

The blue jay eats our sunflower seeds
And likes our suet too.
And to our wild bird tapestry
He adds a splash of blue.

The pine grosbeak, in glowing red,
Makes us exclaim in glee.
But if you want to please us, Lord,
Please bless our chickadee.

- By Victor J. Harper 1978



*Pussy willows and matted grasses —
"redolent/Of springtime odors"*

Victor C. Friesen

LETTERS

FEMALE CARDINAL NEAR TISDALE, SASKATCHEWAN

At approximately 0930 on 10 January 1995 a female Cardinal flew to our feeder mounted on the outside sill of our dining room window. The temperature was -20°C . We live 13 miles northwest of Tisdale.

Although we had never seen a female Cardinal previously, she was easy to identify. As she alighted on a shrub, her underwing and tail feathers appeared dull orange. Her crest and wide, bright orange beak were distinctive. Joyce Mohr, a bird-watching friend, informed us that occasional Cardinals have been counted on Saskatchewan Christmas Bird Counts.

Unlike the chickadees, woodpeckers, grosbeaks and squirrels which are regulars at our feeder the Cardinal never appeared to become at ease. She spent ten days enjoying sunflower seeds and a birdseed mix. She left on 18 January with the temperature at -10°C .

We have fed birds for thirty years. This is the first time we have hosted such a special guest. We wonder if other birdwatchers will report a similar visitor and if we may be able to trace her journey. Although we miss the Cardinal we hope that her ten-day sojourn here helped her gain enough fat energy to successfully continue her travels.

- Marjorie and George Currey, Box 725,
Tisdale, SK. S0E 1T0

A CHICKADEE'S LARDER

During fall 1992, after all the leaves had fallen, I noticed a wasp

nest hanging from a branch of the maple tree in front of my picture window. I thought at the time I was lucky I hadn't got stung as I watered my flowers on the lawn below the nest.

In early February 1993 I noticed one chickadee hopping around on the maple branches. I was looking for more than one as I had often seen two in the previous few weeks. Then I saw this little bird was in the wasp nest. He went up through the nest entrance at the bottom. I could just see his tail. He went in and out as I watched.

I saw him regularly for about three days. He had eaten all the wasps and left just the shell of the nest. I didn't see him again: he may have found another wasp nest to clean out.

- Nina Cross, Box 302, Saltcoats, SK.
S0A 3R0

EARLIER USE OF THE NAME CANADA GOOSE

When I wrote the article, "How did the Canada Goose gets its name before there was a Canada?" in *Blue Jay* 52:141-143, I accepted the statement made by all six consecutive American Ornithologists' Union Check-lists, 1885 through 1993. Each stated that the Linnaeus name was "based mainly on" Mark Catesby's plate 92, published in 1729-32 and quoted by Linnaeus in 1758.

My article prompted Alan Brown of Oakville, Ontario, through a number of visits to the Royal Ontario Museum and the Thomas Fisher Library at the University of Toronto, to research the even earlier use of the

name by Francis Willughby and thus document his recollection of prior usage. With some difficulty, Brown gained access to a precious volume of Francis Willughby's great work, *Ornithologiae*, published posthumously in Latin in 1676, and seen through the press by his friend, John Ray.¹ C.E. Raven notes that Willughby's book "laid the foundation for serious scientific progress" and thus began "a new epoch in its special field."² Willughby named and described the Canada Goose (p. 276) and illustrated it (plate 70), 56 years before Catesby and 82 years before Linnaeus. Although use of Latin binomials had not yet been standardized, Willughby named the goose *Anser canadensis*, followed by the terse phrase "*Locum titulus indicat.*" John Ray, in his 1678 translation of Willughby into English, rendered this as "*The title shews the place whence*

it comes,"³ thus inferring that the bird illustrated by Willughby came from "Canada." As Alan Brown said in his letter to me: "What could be plainer? Or more obscure?"

Only in 1957 did the AOU committee make a ruling that, in this instance, "Canada = the city of Quebec," making Quebec City the official type locality for this species.

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2. RAVEN, C.E. 1986. John Ray, naturalist: his life and works. Cambridge, Cambridge University Press.
3. WILLUGHBY, FRANCIS. 1678. *The Ornithology of Francis Willughby* (3 vols.). London, John Martyn.

- C. Stuart Houston, 863 University Drive, Saskatoon, Saskatchewan. S7N 0J8



Canada Goose goslings

Lorne Scott

FALCONS HUNTING ROCK DOVES

On Tuesday 29 November 1994 I once again had the opportunity to witness a Rock Dove pursued by a Peregrine Falcon, much the same as I wrote about in the March 1966 issue of *Blue Jay*. At four different times I saw the Peregrine unsuccessfully attempt to catch pigeons.

Later in the day it appeared again and, while it was pursuing pigeons that were flying around the farm buildings, a small flock of 20 birds climbed to a height of perhaps 400 feet. While they were circling, the falcon flew perhaps a quarter of a mile eastward and then began to ascend. The pigeons, on seeing this, began also to climb in tight spirals in order to stay higher than the falcon. All the birds climbed until they were mere specks directly above and I guess this would be about 4,000 feet as I can see a flying pigeon at 3/4 mile which is 3,900 feet on the level without the use of binoculars.

At this time I noted the larger speck which was the Peregrine moving toward the flock and it was soon in pursuit of one pigeon that was coming down. Both the Peregrine and the pigeon were descending at a tremendous speed, flying straight down. Four times the Peregrine overtook the pigeon, but each time the pigeon dodged the falcon. At last the pigeon reached the shelter of the farm trees where it took refuge in a large elm in front of the picture win-

dow and sat motionless for at least two hours. The Peregrine sailed on in a southerly direction. Then about 4 o'clock in the afternoon it again was seen pursuing pigeons when four mallards flew up and immediately it left the pigeons to go after these ducks. In less than a minute all were out of sight so I do not know the outcome.

On 13 January 1995 I was walking east to my big dam. Over a quarter mile from home I saw, at a height of some 200 feet, a Gyrfalcon chasing and gaining on a pigeon. Just as the gyr was about to seize it, the pigeon made a twist and dropped about fifty feet. The pigeon then flew west and came directly over me. I put my binoculars on them and watched the homeward race. Soon the pigeon appeared to tire and the gyr again closed in, about to grab the pigeon. At that moment the pigeon seemed to explode; with a sudden burst of speed it plunged downward leaving the falcon behind. The falcon overtook the pigeon and got above it but the pigeon once more outmanoeuvred the gyr and gained the safety of our farmyard trees. The gyrfalcon settled on top of my lookout tower.

It seems pigeons have a remarkable ability, often, to move quickly and give the necessary extra burst of speed. Not always are they this fortunate, but they don't give up.

- Sig Jordheim, Box 544, Kyle, Saskatchewan. S0L 1T0.

The Audubon Christmas Bird Count for December/92-January/93 had over 43,000 participants. 637 species, totalling 54,000,000 birds, were found on over 1,600 counts in North America. In Central and South America, 1,405 species were found on 47 counts. *American Birds* 47:478.

BOHEMIAN WAXWING NURSED BACK TO FLYING

A huge mountain ash grows only 3 m from our living room picture window. Toward the end of March 1995 large flocks of Bohemian Waxwings feasted on the plentiful orange berries. On 28 March 1995, at dusk, I saw a Bohemian Waxwing on the ground beside the driveway. It must have been sitting there for some time because the snow underneath it had melted. When I approached her and crouched down for closer inspection, in a nearly beak to nose encounter, she did not hop away. When I stood up it hopped through the fence into the backyard, one wing dragging in the snow. A telltale smudge on the picture window indicated the bird had become injured while crashing into it.

When I approached the bird again, now equipped with a cardboard box, she offered no resistance. Not shy nor fidgety, "Betty" fed eagerly on proffered mountain ash berries, probably her first meal in several hours. For the night I placed the box, with the lid open, into a spare room where the heat was turned off and the temperature about 12°C.

The next morning I found she had escaped from the box and was inspecting her guest room, hopping about the shag carpet. Bob Ewart of the Wascana Centre, Regina advised me to tape the wing onto the body with masking tape, making sure it was loose enough for breathing, and to provide food and water at room temperature for two days. Then I was to take the bandage off and let the bird flap its wings within a cage for another day. If the wing had only been bruised or sprained the bird might be able to fly again.

My wife and I carefully taped the wing into a near normal position and nailed some window screens to-

gether into a cage measuring about 135 x 145 x 70 cm high. "Hospital food" consisted of mountain ash berries and water provided fresh several times a day. The bird ate and was "regular" enough that I had to clean the cage several times a day. I don't think Betty enjoyed her hospital stay for she hopped onto the screen and hung onto it for a few moments again and again. Outside her window noisy, restless flocks of Bohemian Waxwings cleaned up the remaining berries. I wonder whether she sensed or saw them. She spent the following two nights on the floor in the darkest corner of the cage.

On 31 March I covered the cage with screens to prevent the convalescent from flying into the window and possibly re-injuring herself and took the tape off with only a few feathers sticking to it. Now she became really active. I placed a 30 cm high log of firewood into the cage. Betty climbed onto it and later flew back and forth from it to the screen. After about 10 minutes of this activity she would rest for about an equal period before resuming her exercise. Her injured wing still drooped slightly but she flapped it vigorously. The next night she perched on the log.

The morning of 1 April was sunny. At 11:50 a.m. I sat Betty on the ground, in the midst of black berries from a nearby buckthorn bush, in Wascana Park. The temperature was about 7°C. She flew immediately onto a branch about 3m from the ground in a blue spruce 15 m away. She remained in the tree for more than 4.5 hours shifting between adjacent branches. Using a stepladder I took Betty's picture from less than 1m distance. After 4:30 p.m. I lost sight of her and on three later visits, the last one about noon on 2 April, I could not see her anywhere in the vicinity.

Obviously the bird could fly again. But why did she sit in the spruce tree for 4 1/2 hours? Can a Bohemian Waxwing only function within a group and is lost and doomed when not flying or feeding in a flock of its own kind? Could she keep up with a whirling and migrating flock? I saw

and heard Bohemian Waxwings several times in the vicinity on the day my patient was released and until 7 April. I hope she was able to join a flock.

- Diether P. Peschken, 2900 Rae Street, Regina, Saskatchewan. S4S 1R5



Bohemian Waxwing ("Betty")

Diether Peschken

Out of the cradle endlessly rocking,
Out of the mocking-bird's throat, the musical shuttle.
Walt Whitman



John Dubois found another unusual bird Oct. 3 [1993] on Alexander Road in Quyon. It was an immature wheatear, seen later by other birders. *Elizabeth Le Geyt, 1993. Bird Watching. The Ottawa Citizen, 16 October.*

NATURE LIBRARY

A BIRDER'S GUIDE TO CHURCHILL

Bonnie Chartier. 1994. American Birding Association, Box 6599, Colorado Springs, Colorado, 80934-6599, USA. 132 pp.

Churchill, Manitoba is considered by many to be one of Canada's hot-spots for birders. Located at the mouth of the Churchill River, on the coast of Hudson Bay, a rich variety of habitat awaits the annual return of birds and birders. Birds of the Arctic nest along the coastal strip of tundra, boreal forest birds nest in the taiga and seabirds are found on the tidal shores.

Bonnie Chartier has presented the visiting birder with a comprehensive guide to the area. The first part of the book contains an introduction to the region covering human history, vegetation, weather, local tourist attractions, accommodation and transportation options. A particularly useful section describes the "Progression of Summer," which summarizes changes in birding activity from mid-May through the peak month of June and on to July and August. A code of ethics for the visiting birder is a must read, as is the "Polar Bear Warning."

The second part of the book covers a guide to all birding areas accessible from the 105 km of local roads. It contains detailed maps along with a discussion of the birds likely to be found in June or July along each kilometre of the road network.

The third part of the book begins with an annotated list of those birds of particular interest to the visiting

birder. Bar graphs then reflect the monthly status of 167 species with designations of: Hard to Miss, Should See, May See, Lucky to Find, and How Lucky Can You Get. Species names are given in English, French and Latin.

The book is lavishly illustrated with sketches and photographs of birds and landscapes. The end of the book includes lists of accidental bird species, amphibians, mammals, butterflies, moths, and plants, as well as a listing of useful local telephone numbers and addresses.

I was extremely impressed with the format and accuracy of this book. All members of the 1994 Nature Saskatchewan Tour to Churchill found it to be excellent. I would strongly recommend it to anyone visiting Churchill or to writers of other bird-finding guides.

- Reviewed by *Stan Shadick*, 304 - 1008 Temperance St., Saskatoon, SK. S7N 0N6

PERFECT MORNING ALONG THE SOUTH SASKATCHEWAN

Peter Jonker. 1994. Compact disk. Recorded and produced by Peter Jonker. 213 - 4040A 8th St. E., Saskatoon, SK. S7H 5L4

This is an unedited recording of wildlife sounds as heard between 0400 and 0600 hours on 30 April at one spot along the South Saskatchewan River, approximately 45 km south of Saskatoon. It is an excellent snippet of the chorus produced by some 30 species of birds, mammals and frogs. And, while it happens every spring morning in our own

“backyard,” it is not until someone with expertise goes to the effort of digitally taping the chorus and making it available for armchair listening that most of us get to appreciate it — at any season of the year. Neither human voice nor any other sound pollution is heard. The author is a member of the Saskatoon Natural History Society and Nature Saskatchewan. This is the first of a planned series.

It seems as though there is never a second's silence — sometimes two or three species vocalizing simultaneously. That does not make it overwhelming to listen to, but it is tough on anyone trying to list the species contributing. Because it was recorded as it happened, there are near and not-so-near species. Setting the volume for comfortable listening to the background sounds gives the impression that the foreground ones are at your elbow — not an unpleasant experience.

The very close species are Canada Goose, Rufous-sided Towhee (more than 100 songs and some call notes), a Sandhill Crane on a sandbar (single calls for ten minutes) and, briefly, a female Mallard, a Black-capped Chickadee and gulls. A Song Sparrow or two sing through the entire first cut — more than 150 songs. One or more chickadees, “chickadeeing” and whistling, replace them on the second half. Ducks and geese are almost constantly commenting through both parts and a flock of Snow Geese converse as they fly over. Mourning Doves, American Crows, Black-billed Magpies and an American Robin are also prominent.

If none of that turns you on how about Ruffed Grouse? A male drums more than a dozen times on each cut. And Great Horned Owls! They

also make themselves heard over everything else on both halves.

Then there is the percussion group — the Beaver splashing its tail, Snowshoe Hares thumping around, deer bounding away, and other sounds that I could not identify, one of which was apparently a porcupine “complaining.” Thirty seconds into the first cut a wood frog calls in the background.

The front panel includes a reproduction of stained glass that Peter made. The back panel describes what happens on each cut. However, the Marbled Godwit referred to in the first part is a Willet; there is a godwit in the second. The Western Meadowlark mentioned is so far away that it might be missed. None of which detracts from the fact that this CD is a great buy, worth enjoying again and again — especially in winter. Available from gift shops, record and department stores.

- Reviewed by *Bernie Gollop*, 2202 York Avenue, Saskatoon, SK. S7J 1J1

NATIONAL AUDUBON SOCIETY FIELD GUIDE TO NORTH AMERICAN BIRDS

John Bull and John Farrand. Revised by John Farrand. 1994. Knopf, New York. 797 pp.

The dust jacket proclaims this edition to be “Completely Revised — All New Photography” and that appears to be about 95% true. The number of species has purportedly gone from 456 breeding species to 508 species (whatever that means). Photos-per-page are the same (2.3), suggesting there may be fewer illustrations per species.

The photos are new, generally sharper and brighter, and there are 62 more of them, made up in part by adding shots of species considered rarities, such as Yellow-bellied Flycatcher, Say's Phoebe and Baird's Sparrow. For at least one species (Lincoln's Sparrow) the photo is new only in that it has been reversed between issues. California and Mew Gulls, both prairie province breeders, were omitted in 1977 and still are. The same is true for Varied Thrush and Rosy Finch.

However, there is a bigger gaff. Between editions, the west boundary of the eastern region moved to the mountains: in 1977 the Cypress Hills were excluded while in 1994 they are included. But the reviser forgot to add in the species acquired by the expansion. If you are heading for the Cypress Hills, leave this book at home. You won't find Trumpeter Swan, Sage Grouse, Red-breasted Sapsucker, Dusky Flycatcher, Townsend's Solitaire, MacGillivray's Warbler or Brewer's Sparrow — in text or pictures.

More than half the species have a single image. Only Oldsquaw and Northern Oriole have as many as three. Red-tailed and Swainson's Hawk have one photo each. Of Saskatchewan warblers in the Audubon Guide, two-thirds show only the male in breeding plumage. For immatures of six species of our white-headed gulls, Audubon has three illustrations, the Western Peterson has 24 and the National Geographic has 19.

The "exciting dimension" that photos are supposed to add is marred by too many photos having the same problem as in the previous version — uneven rendition: too washed out, too dark, too yellow, too red, too

blue, etc. In the copy I have, Clay-coloured, Grasshopper and Le Conte's Sparrow, Veery, and Palm Warbler look like new species between editions. Swainson's and Gray-cheeked Thrush, water-thrushes and young night-herons were brown in 1977 but are now gray. Particularly disturbing (or enlightening) is the shading on the head and neck of Common and Red-throated Loons — it is reversed between editions.

This book repeats other problems with photos: no facing text and too few species visible for comparison on an open page and the problem of scale (e.g., a big Boreal Owl facing a smaller Great Horned Owl).

Species accounts — with more space than other major guides — vary from largely the same to largely rewritten. However they are finally organized in a logical and conventional way — AOU or checklist order. In the 1977 edition habitat was the criterion, with the result that species we would find on a single slough, Northern and Wilson's Phalarope, Mallard, Black-bellied Plover and Willet, were located under groups called open ocean, freshwater marshes, lakes, ponds and rivers, sea-shore and salt marshes respectively. Another improvement is the addition of marginal distribution maps.

No doubt about it, this is a pretty picture book. However as an identification guide, see if you can get someone to give it to you as a gift. Incidentally, in 1977 it cost \$9 while it is now \$26.

- Reviewed by *Bernie Gollop*, 2202 York Avenue, Saskatoon, SK. S7J 1J1

Saskatchewan Natural History Society Statement of financial activities and fund balance for the seven months ending March 31, 1995, with comparative figures for 1994 (12 months)					
Income	Operating Fund (\$)	Trust Fund (\$)	Managed Fund (\$)	Total 1995 (\$)	Operating Fund 1994 (\$)
Sask Lotteries	60,000	—	—	60,000	106,400
Conservation program	2,241	—	—	2,241	27,483
Education	10	—	—	10	3,377
Endangered species/spaces	691	—	—	691	18,052
Specified programs (schedule 1)	11,406	—	—	11,406	19,980
Self-generated (schedule 2)	35,939	—	—	35,939	50,067
Other revenue (schedule 3)	21,848	—	—	21,848	42,771
Trust fund - net (schedule 4)	—	(6,483)	—	(6,483)	3,696
Managed fund (schedule 5)	—	—	67,048	67,048	90,379
Total	132,135	(6,483)	67,048	192,700	362,205
Expenses					
Administration (schedule 6)	62,842	—	—	62,842	104,168
Travel & meetings (schedule 7)	5,410	—	—	5,410	11,848
Communications (schedule 8)	25,618	—	—	25,618	33,927
Programs (schedule 9)	36,696	—	—	36,696	81,101
Other expenses (schedule 10)	4,583	—	—	4,583	40,790
Managed funds	—	—	67,048	67,048	90,379
Total	135,149	—	67,048	202,197	362,213
Net income (loss)	(3,014)	(6,483)	—	(9,497)	(8)
Fund balance, beginning of year	25,835	299,388	—	325,223	325,231
Fund balance, end of year (retained earnings)	22,821	292,905	—	315,726	325,223

Saskatchewan Natural History Society Balance sheet for seven months ending March 31, 1995					
Assets (\$)	Operating Fund (\$)	Trust Fund (\$)	Managed Fund (\$)	Total 1995 (\$)	Total 1995 (\$)
Cash & short-term deposits	79,440	43,087	—	122,527	178,425
Accounts receivable	15,751	—	—	15,751	34,532
Inventory - Bookshop	13,956	—	—	13,956	13,080
Prepaid expenses	—	—	—	—	3,222
Marketable securities (quoted market value \$257,079; 1994 - \$249,451)	—	249,817	—	249,817	249,310
Capital (note 4)	50,536	—	—	50,536	50,536
Interfund receivable (payable)	(32,427)	—	32,427	—	—
Total	127,256	292,904	32,427	452,587	529,105
Liabilities and Fund Balances					
Accounts payable & accrued liabilities	10,505	—	—	10,505	5,049
Deferred amounts funding (note 5)	11,577	—	—	11,577	69,581
Restricted					
Open (schedule 1a)	23,943	—	—	23,943	28,609
Closed (schedule 1b)	7,874	—	—	7,874	7,874
Managed (schedule 5)	—	—	32,427	32,427	42,233
Total	53,899	—	32,427	86,326	153,346
Fund balances (schedule 4 - trust fund)	22,821	292,904	—	315,725	325,223
Equity in capital assets	50,536	—	—	50,536	50,536
Total	127,256	292,904	32,427	452,587	529,105

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